



COVERING THE PLANET:

ASSESSING THE STATE OF CLIMATE AND ENVIRONMENTAL JOURNALISM GLOBALLY

A REPORT FOR INTERNEWS' EARTH JOURNALISM NETWORK BY:

Gabi Mocatta, Shaneka Saville, Nicholas Payne, Jerry Lai, Lova Jansson, Kristy Hess

Deakin University, Melbourne, Australia



Acknowledgement of country

We acknowledge the Traditional Custodians of all the unceded lands, skies and waterways on which Deakin students and teachers come together, and on which our research takes place. In virtually and physically constructed places, we pay our deep respect to the Ancestors and Elders of Wadawurrung Country, Eastern Maar Country and Wurundjeri Country, as well as the Traditional Custodians of all the lands on which this research has taken place. We acknowledge that study, education and learning have taken place on these lands in diverse settings, by diverse peoples, for many thousands of years.

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1. Executive Summary

Media are the key source of information about climate change and environment for most people. Media define for audiences what environmental problems are, their causes and consequences, and provide options to act in response. Understanding how journalists all around the world report on climate change and the environment is crucial in the current moment in which attention to environmental crisis is so urgently needed, if we are to confront such crises and galvanize change. However, to date there has been no study on a truly global scale clarifying the challenges and enablers, role conceptions and professional development needs of journalists who cover climate change and the environment.

The study reported on here provides a novel, truly global benchmark of the current state of climate and environmental journalism. This broadly international study is the only contemporary one of this scope and scale, incorporating the voices and insights of journalists in 108 countries. This study finds a varied landscape in which journalists strive to bring to public attention the environmental issues and problems that matter most, as well as solutions that are being enacted in regions around the world.

This study highlights positive trends as well as more worrying tendencies, each manifested with local nuance. Journalists reported that the volume of coverage of climate change and the environment is increasing in most places – though this is set against a backdrop of shrinking newsrooms, reductions to media freedom in some jurisdictions, and an expansion of misinformation and disinformation. In this context, the key challenge facing journalists who report on climate change and environment today is inadequate resources to verify, amplify and diversify their work. Importantly, the study also noted a concerning trend among journalists in some countries still seeking to ‘balance’ their climate change reporting by including contrarian sources – those that deny that climate change is happening, or that it is

being caused by humans. This use of ‘false balance’ in climate change reporting is a practice that recent research has considered to be a tendency of the past. The study also demonstrates that journalists’ safety is a cause for concern. Environmental reporting puts journalists in some parts of the world in real danger, and many journalists feel the need to self-censor to stay safe.

Every story is a climate story.

Crucially, journalists overwhelmingly agreed that support from

external funding organizations was essential to enabling their climate and environment reporting. However, they are concerned with maintaining journalistic independence: neither wanting to be perceived as serving funders’ requirements or newsroom dictates, and motivated above all by the needs of their audiences.

In our current global moment, every story is a climate story – and every story, singularly and collectively, has the potential to address the threats faced by our shared planetary habitat. This report traces the global landscape of climate and environmental reporting in detail, and in doing so, brings to light some of the challenges and needs of journalists doing the crucial work of ‘covering the planet’.

1.1 Key findings of this study

- Journalists perceive that coverage of climate change and the environment has increased over time, mainly due to the increase in problems related to environment, and, to a lesser extent, due to increasing public interest.
- Journalists reported overwhelmingly (82% affirmative) that climate and environmental stories now have more *prominence* – relative to other subjects – than a decade ago.
- Journalists reported in interviews, however, that the volume of coverage of climate change is still not commensurate with the seriousness of the problem.
- Journalists said a health frame was how they were most likely to approach their climate and environmental coverage (70%). Other key themes related to the environment that journalists reported on were deforestation (58%); water and sanitation (58%); water pollution (57%); government policy (56%); and plastic pollution (53%).
- Journalists noted overwhelmingly that a lack of resources limits their coverage of climate and environmental issues (76%).
- The concept of ‘balance’ is still being used in many countries as a reason to include climate ‘skeptical’ sources in reporting about climate change. 62% of surveyed journalists reported including statements from sources who are skeptical of anthropogenic (human-caused) climate change or climate science.
- Most journalists adhere to professional norms like objectivity, seeing this as the core of their profession. Few journalists said they would advocate for particular positions or policies on climate or the environment in their role.
- Journalists in some countries are threatened because of their work and feel they have to self-censor. 39% of journalists are sometimes or frequently threatened because of their work and the same percentage of journalists has self-censored when covering climate and environment-related issues.
- Threats to journalists come mainly from those pursuing illegal activities in relation to the environment.
- Climate and environmental reporting is also complicated by misinformation. 58% of journalists surveyed said that misinformation had increased in the last decade. The source of that misinformation was overwhelmingly social media (93% of journalists observed this).
- To increase their capacity to report on climate change and environment, journalists report the top five priorities for assistance as being: more funding for in-depth journalism (79%); in person training and workshops (75%); fellowships to attend conferences (72%); more access to relevant data (67%) and better access to subject experts (60%).
- In the survey and interviews, journalists agreed that the work of media support NGOs was crucially important to their climate and environmental reporting. Many journalists said that they would not be able to report on climate or environment without this assistance.
- There is a tension between journalists’ desire for NGO funding to cover climate/environment, and their need for freedom and independence in their work.
- Journalists prefer NGO funding not to be tied to particular subject matter: they would like to be free to cover the climate and environmental topics that are most locally relevant for their audience.
- Journalists did report in the survey and interviews that they had seen changes as a result of their work. This was mostly related to their audiences (and included a perception of better public understanding). 29% of journalists reported government policy change as a result of their work.
- Journalists are focusing on climate and environmental problems as well as their solutions. 72% of journalists said that they reported problems and solutions roughly in equal balance.

1.2 Summary of recommendations



For funding organizations

- Funders should make more support available for journalists covering climate change and the environment.
- Funders should work with journalists and newsrooms for a focused approach and longevity of funding.
- Funders should consider journalists' diverse training needs in different country contexts.
- Funders should enable journalists to cover the stories they deem most locally relevant.
- Funders may need to develop a more nuanced approach to 'objectivity' and 'advocacy.'
- Funders should be realistic when it comes to asking journalists to assess impact.
- Funders should avoid donor influence on environmental news coverage, and the perception of it.

For newsrooms

- Newsrooms should encourage some journalists to specialize in reporting on climate change and the environment.
- Media outlets should publish and broadcast more climate and environment stories and make them more prominent.
- Newsrooms should encourage collaboration and knowledge sharing between journalists: all stories are climate stories.
- Newsrooms should consider collaborating with climate and environment news specialist organizations.
- Newsrooms must help journalists understand misinformation, its origins, and how to avoid it.
- Media must work to protect journalists' physical, legal and digital safety.

For journalists

- Journalists must focus on making global environmental issues locally relevant.
- Climate and environmental journalism should cover solutions as well as problems.
- Climate justice perspectives should be highlighted in climate change reporting.
- Journalists need to consider their own, and their media outlet's position on the spectrum between 'objectivity' and 'advocacy'.
- Journalists should not provide a platform for sources that deny climate science.
- Journalists need to build their knowledge on attribution science.
- Journalists need to work together to ensure climate/environment issues suffuse more reporting.
- Journalists need to make clear humans' dependence on the natural world.

2.

BACKGROUND AND PURPOSE OF THIS STUDY



Climate change and environmental harms are the defining issues of our times, requiring profound, unprecedented and urgent global action (United Nations 2023). The Intergovernmental Panel on Climate Change (IPCC) warned in its Sixth Assessment Report in 2023 that global heating will likely exceed 1.5°C on our current emissions trajectory and that current policy commitments would see a temperature rise of 2.7°C by 2100 (IPCC 2023). Many environmental changes will be irreversible beyond 2°C of heating (Hoegh-Guldberg et al. 2019). Climate change is projected to intensify extreme weather events including cyclones, storms, heatwaves, droughts and floods. It will also accelerate the loss of ice sheets and glaciers, resulting in both global sea level rise and water scarcity in glacier-fed catchments (IPCC 2018). Global biodiversity is likewise at risk from climate change and other anthropogenic environmental harms. The Intergovernmental Science–Policy Platform on Biodiversity and Ecosystem Services (IPBES) reported in 2019 that one million species are threatened with extinction and that extinction is occurring at a rate tens to hundreds of times faster than the average over the past 10 million years (IPBES 2019). Shockingly, it has been estimated that there will be more plastic than fish in our oceans by 2050 (ABC/AFP 2016). Human populations everywhere are already, and will continue to be, affected by climate change and environmental degradation, with the people and places least equipped to deal with such risk and damage currently experiencing the most severe impacts (Saeed et al. 2023).

Given this dire state of our shared global environment, the need for meaningful responses to climate change and environmental degradation in all sectors of society is now acute. Public understanding of these issues – one avenue to spur policy change – is now crucial. However, ‘climate literacy’ (Azevedo and Marques 2017) is not widespread on a global level and many people have difficulty understanding their own impact on the climate as well as connecting the impacts of environmental issues with their own lives and futures (Moser 2010). Most people derive their understanding of climate and environment from the media (Newman et al. 2020) making the intersection between media and environment a crucial site for study. How the information landscape around us defines the causes and impacts of, and solutions to, environmental harms fundamentally influences the actions taken in response. This means that journalists who investigate, curate and analyze climate and environmental information play a crucial role in building public understanding of these pressing problems (Fahy & Nisbet 2011; Hase et al. 2021). At its most impactful, such work may even lead to the kind of policy change that is so much needed to solve environmental harms (Tolmie 2023).

Environmental journalism, and climate journalism specifically, have become a significant field of study in recent decades. Many researchers have sought to understand behind-the-

The purpose of this study is to provide a first, truly global overview of the practice of reporting on climate change and environment...

scenes media production processes, and the challenges and enablers experienced by journalists reporting on environmental issues (for example, Boykoff 2011; Schäfer and Painter 2021). Much research has also investigated reporting of climate change and environment from the point of view of audiences (for example, Bolin and Hamilton 2018; Newman et al. 2018). Most research about environmental communication has, however, focused on high income countries, particularly the USA (Milsten & Mocatta 2022), though research into climate and environmental journalism in low- and middle-income countries is increasing.

The purpose of this study is to provide a first, truly global overview of the practice of reporting on climate change and environment from the point of view of the journalists who are engaged in doing this work. This study also consulted journalists on what they most needed to help enable and uplift their work in this time of acute environmental challenges. Additionally, the study sought to establish how journalists think of those organizations – like philanthropic bodies and media development NGOs – that support, fund and elevate their work. Most studies of climate and environmental journalism to date have not provided a broad, international ‘snapshot’ of such work, or focused on NGO support, to determine how these things unfold in a wide variety of national settings. This study incorporates the insights and voices of hundreds of journalists in both high- and low-income country settings – both specialist climate and environmental journalists and generalists. In the sections of the report that follow, we provide more detail of the global context and extent of this study.

3.

LITERATURE REVIEW



3.1 Practicing climate and environmental journalism, globally, in the 21st century

Since the early 2000s, journalism has been in flux – even in crisis. Media convergence around the online digital landscape has led to the collapse of the traditional business model for doing public interest journalism. Falling advertising revenues have resulted in ‘legacy’ media organizations, globally, cutting journalist jobs and reducing the frequency of print media runs (Bauer et al. 2013). Many traditional media outlets, especially print newspapers, have shifted online or disappeared entirely. The decline in revenue for funding journalism has meant a deterioration in working conditions for many journalists, with fewer resources available for the time-consuming practices of in-depth reporting and investigative journalism (Schäfer & Painter 2021). Fewer reporters are now widely asked to produce more stories across multiple platforms, often within tighter deadlines.

Climate and environmental journalism, in particular, have been affected by these profound changes to the business of reporting the news. In the early 2000s, media outlets especially in high-income countries saw heavy cuts in specialist journalist roles and dedicated beats – including the environmental beat – where this existed (Friedman 2015; Sachsman & Valenti, 2015; Painter et al. 2018). Long running, more slowly developing news stories, as climate and environmental stories tend to be, have also lost ground to often more sensational, event-oriented reporting in the contest for audience attention and advertiser revenue that drives the media’s issue-attention cycle (Bailey 2022; Downs 1972). In this context, climate and environmental news constitute a tiny proportion of overall news coverage – for example, less than 1% of broadcast news in the United States (Cabrera 2020). The Media and Climate Change Observatory Project (MeCCO) has tracked climate change coverage in 126 international media sources, most of these since 2000, and has found issue-oriented peaks in coverage. There has only been a slight overall trend toward increased coverage between 2014 and 2023 (Boykoff et al. 2023).

Parallel to the decline in traditional news media, digital-born media outlets have proliferated, developing a business model that relies on user engagement and social media interactions to generate

advertising revenue (Küng 2016). This shift has fundamentally changed the one-way ‘broadcast model’ of communication, allowing for greater interaction between journalists and their audiences and a greater accessibility of information (and misinformation) to the public (Hansen 2020). Journalists, including those who report on environmental issues, are now increasingly curating and evaluating information from user-produced media for public consumption (Fahy & Nisbet 2011; Brüggemann 2017). In this new, increasingly digital landscape, environmental journalism has thrived in places, while withering in others – as we describe in more detail in the sections that follow.

The decline of environmental beats and the pressures of the changing media landscape are well-documented in high-income countries, particularly the Anglosphere (Kovarik 2020; Schäfer & Painter 2021). Despite recent valuable contributions on climate and environmental communication in lower income countries and the Global South (e.g., Roehyadi-Reetz and Teng’O 2021; Sharif and Medvecky 2018; Takahashi 2023; Das 2019; 2020), there is still a relative paucity of research that sheds light on the current state of climate and environmental journalism in low- and middle-income countries¹ (LMICs), other than countries with rapidly growing economies such as China and India (Comfort et al. 2020). Problematically, LMIC scholars’ research on climate and

environmental journalism is often not acknowledged by their colleagues in high-income countries (Takahashi 2023), who unjustly assume LMIC media outlets unable to financially support environmental journalism (Kovarik 2020).

On the contrary, research shows that – despite challenges – climate and environmental journalism in LMICs increasing, vibrant and locally nuanced. LMICs are now “news makers” not just “news takers” (Ejaz and Najam 2023 p. 2). They no longer simply reflect ‘Northern’ discourse on climate change, but are creating place-specific narratives, often informed by lived experience of climate-driven weather extremes and embedding calls for climate justice (Das 2020). However, more so than their high-income country colleagues, journalists in LMICs are often subject to professional precarity, including earning lower salaries than professionals in other comparable roles in their national contexts (Matthews and Onyemaobi 2020). LMIC journalists also tend to face scarce resourcing for covering climate change and environment and, in some settings, they contend with limited ‘environmental literacy’ among the public (Koop 2020; Jjuuko 2020; Newlands 2020; Okpara 2020). In LMICs, environmental issues are closely intertwined with issues of poverty and human rights (Kovarik 2020). This

¹ To denote low, middle and high-income countries, this study uses the World Bank’s classification of countries by income, based on GNI per capita data. This data is available at: <https://datatopics.worldbank.org/world-development-indicators/the-world-by-income-and-region.html>

makes environmental reporting, particularly in countries that have limited press freedom and/or corrupt systems, more difficult – sometimes exposing journalists to threats and violent attacks (Freedman 2020). Additionally, in developing economies in LMICs, environmentalism and calls for better environmental regulations may be viewed as a hindrance to development progress and economic growth, leaving journalists in these contexts more vulnerable to industry pressures.

Given this context of quite differing conditions for the practice of climate and environmental journalism across the planet, and considering the current research landscape with a ‘Global North’ orientation, it is crucial at this time of unprecedented global challenges to better understand the *global* face of reporting climate and environmental news. Having surveyed the conditions for doing journalism, so radically changed in recent decades, we now turn to the literature on journalists’ own role perceptions in the context of doing climate and environmental journalism.

...research shows that – despite challenges – climate and environmental journalism in LMICs increasing, vibrant and locally nuanced.



3.2 Journalists' role perceptions, advocacy and solutions in environmental reporting

How journalists perceive their professional roles and how they strive to fulfil them greatly influences how their work plays out. Research indicates that journalists' role perceptions have diversified within the shifting media landscape since the early 2000s – particularly in high-income countries (Brüggemann 2017). Traditionally, journalists occupied a 'watchdog', 'gatekeeper' or 'Fourth Estate' role, bringing information to light that those in positions of authority would rather keep hidden and holding the powerful to account, while also controlling what information was brought to the public's attention (Fahy and Nisbet 2011). In the age of user-produced media, however, journalists have also adopted the role of 'curator', 'convener' or 'analyst', assembling information from user-produced as well as expert sources, and deploying their "trained judgement" (Fahy 2018) to evaluate it for audiences.

In addition to these more recent role changes, environmental communicators have long been described as needing to play an "advocacy" role and having an "ethical duty" (Cox 2007) to enable change in the ways we act toward the environment. Since its beginnings in the 1960s, environmental journalism has been criticized for lacking objectivity (Fahy 2018) and climate and environmental journalists, particularly, are often perceived by their journalist peers as active advocates for climate and environmental action (Lester 2013). However, the literature suggests that journalism as a whole has been moving away from objectivity as a professional practice in the digital landscape (Fahy 2018; Salvesen 2018) and indeed, in the context of the profound changes in the global media landscape, some researchers have pointed out a need to think "beyond journalism" (p. 165) and to formulate a broader definition of the field (Deuze and Witschge 2018)

in a time of "post-normal" journalism (Brüggemann 2017). The practice of environmental journalism perhaps especially contributes to the need for a new and expanded understanding of the *role* and *purpose* of journalism.

It has famously been shown, however, that journalistic 'balance' can be problematic when reporting on highly polarized issues such as climate change.

Indeed, there have been calls from journalists themselves to treat climate and environment coverage differently to other areas of journalism. *The Guardian's* global environment editor, Jonathan Watts, has laid out how such reporting must seek to "shape public opinion" and "influence change". "Business as usual is not enough" he has written. "Nor is journalism as usual" (Watts 2020). Journalism researchers have likewise called for journalists to actively advocate for a liveable planet in the course of doing journalism (Brüggemann et al. 2022), and have suggested that the need to respond with advocacy to environmental crisis may indeed be transforming and redefining journalism itself. Brüggemann et al. (2022, p. 1) have outlined what they call "transformative journalism":

The term encompasses a diversity of new role conceptions and practices that converge around an explicit and transparent commitment to contribute to the social-ecological transformation of societies by doing journalism. It is thus a form of advocacy journalism that is special in being dedicated to the most common of common goods, preserving the eco-systems and natural resources of the planet.

Other research suggests, however, that journalists who report on these subjects are cautious to regard themselves as advocates, still preferring to describe their practice as adhering to traditional journalistic norms like impartiality, balance and objectivity (Mocatta et al. 2022; Robbins and Wheatley 2021). This means there is a tension among media practitioners *themselves* about what the professional norms of journalism might look like, when covering climate change and the environment.

It is clear, however, that long-held journalistic norms are in flux and that reporting on environmental harms is one of the drivers of this trend. It has famously been shown, for example, that journalistic 'balance' can be problematic when reporting on highly polarized issues such as climate change. Boykoff and Boykoff (2004) found that the U.S. 'prestige press' in the early 2000s gave climate 'skeptical' sources equal weighting with scientific experts in the interests of 'balance', thereby failing to accurately represent overwhelming scientific consensus on climate change and obfuscating public understanding as a result. More recent research suggests that journalists are increasingly reporting in line with scientific consensus on climate change, only representing climate denialism or skepticism critically in their reporting (Brüggemann and Engesser



2017; McAllister et al. 2021). However, once again, this shift has been noted primarily in research that focuses on media and journalists in the higher income countries in the Global North. Some recent research suggests that such change – including recognizing ‘balance as bias’ – has not happened everywhere (Lidubwi and Wamwea 2023). This study seeks to clarify role perceptions and journalistic norms with a global cohort of journalists.

Audiences’ interactions with news also play into journalists’ current role perceptions and preferred models for doing journalism. In the current moment of seemingly constant ‘bad news’, particularly in relation to the environment, selective news avoidance is becoming more common, globally. News avoidance stems from audience overwhelm with stories that evoke negative emotions and that focus on conflict. Research shows that coverage that is problem-, crisis- or disaster-

Along with solutions journalism, local storytelling may also encourage engagement with climate and environmental news.

oriented stories can lead to audience disengagement with news (Newman et al. 2023). As a result, climate and environmental reporting can fail to conscientize audiences on individual and collective solutions (Hackett et al. 2017). Solutions journalism (also referred to as constructive journalism) incorporates discussion of possible solutions into reporting of a range of social problems (McIntyre 2019; Thier and Lin 2022).

While the literature on solutions journalism has grown in the last

decade, scholars are divided on its efficacy in engaging audiences, and climate and environmental journalism-specific research on solutions journalism is limited. How solutions journalism approaches might translate into action from audiences is not yet clearly established (Lough and McIntyre 2023). Researchers have noted, however, that solutions journalism has the potential to alleviate negative emotions about the news (Hermans and Prins 2022), increase media trust (Thier et al. 2021), and in relation to climate in particular, elevate support for climate policy (Thier and Lin 2022). At the same time, there may remain some misunderstanding among audiences, and even among journalists, about what solutions journalism is, and does. Audiences may perceive solutions journalism as just stories that report ‘good news’, while journalists may misinterpret solutions journalism as simply reporting on ‘solutions’, when in reality, it involves robustly evaluating

and being critical of the successes and limitations of any solutions covered (Dodd 2021).

Some have argued that solutions journalism strays from the journalistic norm of 'objectivity' and could sometimes be categorized as advocacy, requiring the journalist, as it does, to prescribe a particular response to a given issue (Aitamurto and Varma 2018). Other journalism scholars, however, contend that advocacy is an intrinsic part of all journalism, and that journalists should therefore not be deterred from writing solution-oriented stories (Aitamurto and Varma 2018; Fisher 2016).

Along with solutions journalism, *local* storytelling may also encourage engagement with climate and environmental news. Though many media consumers across the globe now have lived experience of climate change and environmental harms, climate change specifically is still perceived in some places as a spatially and temporally distant issue (Rickard et al. 2016). Research indicates that reporting climate change in a way that highlights local impacts and solutions can make the topic more tangible and promote attitudinal changes (Bloomfield and Manktelow 2021; Scannell and Gifford 2013) allowing people to relate climate change to their lived experiences and everyday lives (Nettlefold and Pecl 2022).

This study has asked a global cohort of journalists about their perceptions in relation to balance and advocacy; whether they report more from a perspective of problems or solutions and whether they focus on the global or the local in environmental reporting. The results presented in this report provide empirical data toward clarifying some of the questions and silences in the literature noted above, from the point of view of journalists themselves.



3.3 Dangers to journalists who report on climate and the environment

Environmental journalism is considered one of the more dangerous news beats in the world (Freedman 2020). Reporters sans Frontières/Reporters without Borders (RSF) noted that environmental journalists are more likely to be subjected to violence than other journalists due to a “hostile climate” for environmental reporting, globally (RSF 2015). More recently, Trionfi (2024, p. 4) has documented how:

Certain stories – which vary from region to region – are effectively off-limits for journalists due to the dangers associated with covering them. This censorship silences vital public-interest information and endangers the fight to protect the environment and address the climate crisis.

While all journalists face risks in their work, reporters in countries with little or no press freedom are more likely to be subjected to threats, harassment and physical violence. This is due to political and economic interests, and sometimes criminal and corrupt activities that are often implicated in perpetrating environmental harms (Fahn 2004). Between 2005 and 2016, an estimated 40 journalists were killed due to their environment-related work – more than all the journalists killed covering the U.S. war in Afghanistan (Warren 2016), and the toll on reporters covering the environment continues (RSF 2020).

While most violent attacks on environmental journalists occur in LMICs, those in high-income countries can also be targeted. For example, Finland has been ranked first in the World Press Freedom Index multiple years in a row, however, there have been reported incidents of verbal harassment and death threats, and targeted smear campaigns toward environmental journalists due to increasing political and societal

polarization (Hiltunen 2016). There are also accounts from environmental journalists in the United States who have been arrested while reporting on environmental protests, had their gear confiscated, and been intimidated by police (Freedman 2020).

In 2015, Reporters Without Borders declared India and Cambodia to be the deadliest countries for environmental journalists in the

...reporters in countries with little or no press freedom are more likely to be subjected to threats, harassment and physical violence.

world (RSF 2015). In 2020, India was again in focus as a hotspot for journalist harassment and murder. RSF has documented threats, arrests, spurious prosecution and various kinds of harassment as ways that environmental reporters have been targeted by governments, business interests and those undertaking illegal activities (RSF 2020). And while some stories of journalist deaths become headline news, like the 2022 killing of British journalist Dom Phillips in Brazil’s Javari Valley, others, like the 2020 death of Shubham Mani Tripathi, who was covering illegal sand mining in Uttar Pradesh, India, are hardly reported at all.

In the 1980s, Latin America was considered one of the most dangerous places in the world for environmentalists

(Koop 2020). Environmental journalists often faced persecution for reporting on environmental issues that exposed corruption and human rights violations (Kovarik 2020). As a result of violent attacks on environmental journalists, many newsrooms greatly scaled back environmental reporting, or stopped it altogether, in the 1990s and early 2000s (Koop 2020). Although the 2000s have seen a resurgence of environmental reporting in parts of Latin America, many dangers remain (De Assis 2024). A spate of journalist murders in Colombia between 2017 and 2023 have again brought journalism in Latin America into focus. Trionfi’s 2024 report details that harassment from illegal actors, and sometimes “state actors colluding with the illegal actors” (p.30) is a common experience for journalists covering climate and environment in Latin America.

Aware of the current dangers or doing climate and environmental journalism, in this study, we also probed journalists about whether they had experienced such issues. This study was concerned with establishing just how much of a problem safety and security are currently for journalists covering the environment, in diverse global locations. This study also investigated whether safety concerns affected news that is produced, for example, by resulting in self-censorship. As we report in detail in the sections that follow, a slim majority of our respondents had *not* experienced threats or danger as a result of their work, however, many said they needed to self-censor at times. We did note a slight trend toward gender diverse journalists experiencing more harassment than any other journalists – as we explain in more detail below.

RSF has documented threats, arrests, spurious prosecution and... harassment as ways that environmental reporters have been targeted by governments, business interests and those undertaking illegal activities.



3.4 Alternative (re)sources and models for climate and environmental journalism

As the global imperative for supporting and uplifting climate and environmental journalism has become clear, an array of different (re)sources and models for financially aiding and providing information for climate and environmental journalism has emerged. These include information subsidy to journalists by environmental non-government organizations (ENGOS); single subject, specialist news outlets – themselves often philanthropically funded – as well as specialist media support NGOs offering funding and training to journalists in diverse national contexts. All these models facilitate climate and environmental news that would otherwise not be financially viable (Comfort & Blankenship 2021).

Research into ENGOS as information sources for journalists is fairly limited (Powers 2015), but the extant literature suggests that ENGOS are an important source of information for journalists on climate change and environmental issues (Sakellari 2023). As traditional media have downsized since the 2000s, ENGOS have become more professionalized and competitive in their ‘information subsidy’ to journalists (Powers 2018). ENGOS have indeed been characterized in the literature as ‘alternative newsmakers’ (Wright 2019), and, although non-profit and NGO media have existed for some time, their expansion in the digital media landscape has allowed them to effectively bypass news media gatekeeping and, perhaps, professional journalistic norms (Cox and Schwarze 2022; Carvajal et al, 2012). While some academics are concerned about ENGOS’ information subsidy to journalists not adhering to journalistic standards (Comfort and Blankenship, 2021), most literature suggests that NGOs typically follow traditional journalistic norms even at the expense of organizational goals and values (Cottle & Nolan 2007; Moon 2018). ENGOS produce their information

this way to develop a relationship which is mutually beneficial, aiding journalists while ultimately also enabling the distribution of ENGO materials (Konishi 2018).

Since the early 2000s, digital media organizations began to appear online, giving journalists the potential to quickly reach broader audiences (Neuzil 2020; Robbins 2023). Newman et al. (2022) found in their global survey of media audiences that most respondents, regardless of country of residence, accessed online news media more often than other sources of news. ‘Digital native’ media organizations often have a younger target audience (under 35 years old) and dedicated climate and environmental sections to meet these audiences’ interests (Painter et al. 2018). In the digital media landscape, single subject-area news outlets have emerged both in higher income countries and LMICs as an alternative model for investigating and delivering climate and environmental news (Russell et al. 2022). Many such outlets are not-for-profit entities, supported by funding from philanthropic foundations and private donors, or media development NGOs. Such focused online news sites and collectives include Covering Climate Now, Mongabay, Carbon Brief and The Third Pole, offering comprehensive and specialized coverage on climate change and environmental issues, and analysis of the social and political implications of those issues.

The Third Pole (amalgamated into Dialogue Earth in 2024) is an example of a foundation-funded media outlet. The Third Pole is a project that was established by Internews and China Dialogue Trust – the latter a UK-based NGO, itself funded by numerous philanthropic foundations. The Third Pole was established to report on environmental and climate impacts in the Himalayas and Tibetan Plateau,

incorporating journalists from Nepal, Bhutan, Bangladesh, India, Pakistan, and China, among other countries in the region. Similarly, not-for-profit philanthropically funded environmental journalism outlet Mongabay supports climate and environmental reporting in Indonesia, Latin America, India, and Africa, with a network of 800 journalists. Mongabay elevates the voices of local LMIC reporters to a global audience, working in reverse of many other leading subject-focused news outlets where funding and information flow is generally from higher- to lower-income countries. Finally, Covering Climate Now, founded in 2019 to share best-practice climate journalism and training, is perhaps the most well-known example of a single subject news collective. Like other not-for-profit news organizations, Covering Climate Now is itself supported by grants from foundations and individual philanthropists. (As an example, funders include: Actions@EBMF, the Green South Foundation, the Michaux Family Foundation, the Park Foundation, Silicon Valley Community Foundation, Waverley Street Foundation, and the WOKA Foundation). Covering Climate Now shares content with partner newsrooms in 60 countries, including in LMICs. One caveat for this model is that stories may lack the local relevance that makes people more interested in, and more intent to act upon, environmental information.

While such niche environmental news sites provide in-depth coverage on environmental issues worldwide, some scholars argue that these sites only appeal to those who are already well-informed on environmental problems, and therefore produce an echo chamber of like-minded individuals – failing to effectively reach those who are uninterested or disengaged and potentially leaving them uninformed (Gibson, 2017).

Regionally-based environmental and



climate journalism networks are also important sources of information, funding and training that enable especially LMIC journalists in the practice of climate and environmental reporting. Two Latin American examples are ActionLAC, headquartered in Panama and funded by Fundación Ávina, which provides journalists with information on national climate commitments as well as promoting collaboration and knowledge sharing; and LatinClima, a regional climate journalism consortium funded by German and Spanish international development agencies which brings together journalists from across Latin America and the Caribbean for capacity building and information sharing. On the African continent, Water Journalists Africa and InfoNile bring together journalists covering environmental issues in the Nile Basin countries in particular, also helping journalists source funding and training. Elsewhere, societies and membership groups for environmental and climate change journalists, for example the Environmental Journalism Society of Kenya, Society of Indonesian Environmental Journalists and the Oxpeckers Center for Investigative Environmental Journalism² offer mentorship, collaboration and support.

A crucial part of this landscape are specialist media support NGOs and donor foundations that offer grant funding to empower journalism in diverse global locations. Such NGOs tend to share goals of bolstering press freedom, enabling good journalism, confronting misinformation, ensuring safety for journalists and helping media to become economically sustainable. Many such organizations are motivated also by the goals of protecting free

speech and independent media as fundamental prerequisites for democracy. Organizations like Internews, funder of the present study, IMS (International Media Support), JournalismFund Europe, International Fund for Public Interest Media and many other smaller NGOs work internationally in this sphere. Specialist media support organizations have become an invaluable source of funding and training for climate and environmental journalists worldwide as ‘traditional’ media outlets dedicate fewer resources to environmental journalism (Newlands, 2020; Carvajal et al., 2012; Powers, 2015). On environmental themes specifically, Internews’ Earth Journalism Network (EJN) has, for two decades, enabled journalists all over the world – and especially in LMICs – to cover the environment more effectively. By facilitating workshops, fellowships and training, producing content for local media, establishing journalist networks, and funding individual journalists to investigate and produce stories, EJN has amplified climate and environmental journalism, globally.

The ecology of media-support organizations, philanthropic funding and the resourcing they provide to journalists and newsrooms has received rather limited research attention. A recent study indicates that the not-for-profit and philanthropically funded news sector is growing (NORC 2024). A handful of research papers have looked at donor and philanthropic funding in LMICs particularly (Malan 2018; Miller 2009; Myers 2018), some finding that there can be tensions between charitable funding and newsroom independence in LMICs especially (Schiffrin 2017). At the same time, it is clear that quite some journalism in

LMICs might never be produced if not for the support of foreign funders and NGOs – and this may be particularly the case for climate and environmental reporting. As well as enabling such reporting by bypassing other newsroom priorities and relieving professional precarity, external funding support may even help protect journalism from local editorial interference, given the robust reporting structures and oversights generally required by supporting organizations (Townend 2016). At the same time, philanthropic funding should perhaps also be considered a support system or a safety net as media outlets and journalists navigate the changing media landscape and determine what media viability and a sustainable business model looks like today. External funding alone is likely not a sustainable long-term solution to the task of reporting environmental news – though it will likely remain in the mix of factors that enable such journalism, into the future.

Given that there is little existing research into NGO funding of journalism that covers climate and environment specifically, the present study is designed to speak to many research silences. We asked journalists about the current state of climate and environmental reporting in each of their own national contexts, and we wanted to know what specific aspects of reporting these subjects journalists needed assistance with. We wanted to know what kinds of assistance could help amplify their work. We also asked journalists about their relationships with funders and media support organizations. We present the findings of this in-depth look at the NGO/climate/environmental journalism relationship in the sections that follow.

² LatinClima, InfoNile, Water Journalists Africa, the Society of Indonesian Environmental Journalists and the Oxpeckers Center for Investigative Environmental Journalism have all received funding from Internews and the Earth Journalism Network, supporters of this research study.

4.

METHODOLOGY



To address research gaps identified in the literature, as outlined in the sections above, this study undertakes what is perhaps the first truly global assessment of the contemporary state of climate and environmental journalism. The key objectives of this study were to reach a genuinely diverse, international sample of journalists, as well as to research beyond the English-speaking world and the high-income countries, which, as discussed above, have been the context for most environmental journalism inquiry to date (Agin and Karlsson 2021; Schäfer and Painter 2021). As a contemporary study of the state of climate and environmental reporting, this study intends to provide a benchmark for how this journalism specialization is faring, including journalists' perceptions of the amount of climate and environmental journalism that is being produced, the challenges and enablers of this work, and what factors contribute toward either amplifying or silencing it. This study does not undertake media content analysis, but instead focuses on the experiences, perceptions and responses of journalists themselves, prominently incorporating their voices. This study will be of use to organizations that fund journalism on climate change and environment, as well as to journalists, newsrooms and media organizations that are interested in understanding the global face of their profession, relative to climate and environmental reporting. The research presented here is also of use to researchers who investigate the relationship between media and environment broadly.

The study is informed by the following research questions:

- 1: What is the current state of climate and environmental journalism, globally?
 - a. What issues are journalists reporting on, in relation to climate and the environment?
 - b. How frequently are journalists reporting on climate change and the environment?

- 2: How do journalists perceive the prominence of environmental and climate stories as compared to other beats or in the past?

- 3: To what extent do journalists perceive support for climate and environmental reporting from editors and newsroom leadership?

- 4: What are the obstacles to reporting on the environment and climate change, and what are enablers?

- 5: What do journalists need to increase their capacity to report on the environment and climate change?

- 6: What role can funding organizations play in supporting environmental and climate journalists?

4.1 Ethical considerations

The research team applied to the Deakin University Human Research Ethics Committee (DUHREC) which adheres to Australia's National Statement on Ethical Conduct in Human Research. Ethics concerns centered around conducting web-based, multi-country research while it was not feasible to undertake an ethics approval process in each country where respondents originated from. To inform our response to this kind of ethical risk, the research team undertook a review of the (limited) literature about the ethics of internet-based research. We found that other researchers have grappled with this issue, given a recent increase in international research conducted fully online. Looijmans et al. (2022, p.3) have stated that "for international internet-based studies that take place solely online, it seems less obvious to apply

for ethical review procedures in multiple countries". We noted two studies which were international, internet-based studies (DiBonaventura et al. 2010; Hämeen-Anttila 2014) in which researchers applied for and received ethical approval only from the Human Research Ethics Committee of the principal investigator, even though participants in multiple countries were recruited. The research team for this study was asked to submit a detailed 'higher than low-risk' application, in which we noted these precedents in the research on internet-based studies. The project was granted approval under the DUHREC ethics approval number: 2023-260.

The research sought to obtain informed consent from each participant, providing each with a Plain Language Statement which explained the purpose of the research and a

consent form, translated into the study's multiple languages (detailed below). Given the discussion above of the dangers journalists face in some countries, the project survey was designed for anonymous participation. Although interviews were necessarily non-anonymous, interview material has also been used anonymously in this report, and will remain so in any additional research outputs from this study, to protect participants' identities. Only country identifiers for interviewees are used in this report. Transcripts have been stored securely on a password protected Deakin University data repository system to preserve journalists' anonymity. No adverse outcomes were reported during the conduct of this research.



4.2 Data collection



A mixed-methods approach was adopted for this study, including a quantitative survey and semi-structured qualitative interviews. The survey, comprising 32 questions, was created to elicit data in response to the research questions. Response options were either yes/no with a follow-up question; allowed a Likert-scale (5 option) response, or multiple responses. One question had 31 possible (choose all that apply) response options. This level of detail was necessary as the survey was designed to be delivered in multiple languages, so only quantitative response data could be collected. The survey, written initially in English, was then translated into 10 additional languages (Arabic, Bahasa Indonesia, French, Hindi, Portuguese, Russian, Simplified Chinese, Spanish, Swahili, Ukrainian) with the aim of giving accessibility to the widest possible global cohort of journalist-respondents. The survey was hosted on the online platform, Qualtrics. Potential survey participants were contacted through

the researchers' existing networks, and through journalist networks of the funding organization, Internews. Journalists were asked to share the survey link with their peers, and calls to complete the survey were also shared on social media. The intent was for the survey to travel internationally and for journalists to encourage their local colleagues to undertake it.

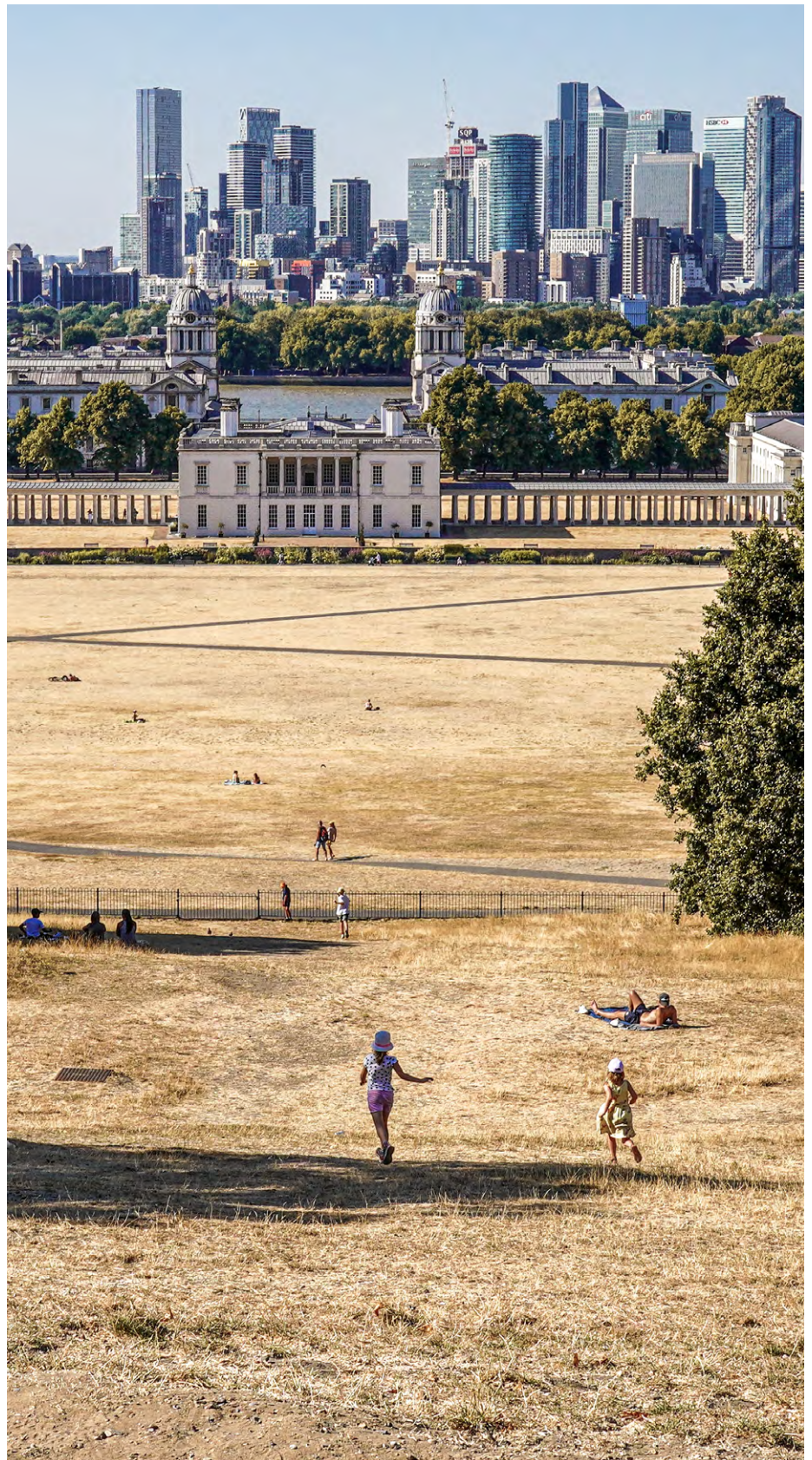
The survey ran from October 2023-January 2024. A total of 888 journalists from 102 countries engaged with the survey over this period, however, 144 journalists were excluded by the initial screening question which asked whether they ever reported on climate change or environment. Participants did not need to be specialist climate or environmental journalists – they only 'sometimes' had to report on these subjects, but this experience needed to be 'current'. Those 144 journalists who answered in the negative were excluded, leaving a cohort of survey 744 respondents. Not all journalists answered every

question, meaning that the number of respondents to questions varies. The number of respondents to each question is provided in the results reporting below. The survey was conducted fully anonymously, and no identifying information was requested of participants, beyond their age, gender and country of residence.

Interviews were used to triangulate the quantitative survey data component with more nuanced qualitative data. To recruit journalist participants for the interviews, we undertook a broad desktop search to locate relevant journalists and editors across diverse global locations. Journalists interviewed could be staff or freelance journalists with any level of experience. This study did not specifically seek out newsroom management or leadership, though some editors were interviewed. The researchers worked with the funding organization, Internews, to compile a global cohort of potential interviewees and researchers' own journalist networks were also used.

Interviewees were not a set of those who had already responded to the survey, though some participants did undertake both the survey and were interviewed (see figure 2). Out of some 200 journalists, editors and media workers invited to interview, 74 journalists consented and participated in semi-structured interviews of approximately 40–60 minutes. In planning the project interviews, we endeavored to incorporate journalists from the largest possible spread of countries. By the time the data collection phase was complete, we had interviewed journalists from 31 countries.

All interviews were conducted online on video conferencing software including Zoom and Teams. A small number of interviews were also conducted on a smartphone using WhatsApp. The majority of interviews were conducted in English. As we sought to ensure interviewees felt comfortable and competent answering the interview questions, all journalists who did not speak English as a first language were offered the opportunity to have an interpreter in their interview. Interpreters were included where journalists requested it, joining the interview and interpreting simultaneously. Some interviews were conducted in Spanish, Portuguese and Swedish with transcripts produced and translated into English. Interviews were conducted by a research team of five interviewers who worked closely together to ensure interviews were consistent. All interviews were transcribed using the AI transcription platform Otter AI, and each automated transcription was then double-checked and corrected by a member of the research team while listening to the recording.



4.4 Data analysis

Descriptive reports of the survey data were generated using Qualtrics. For more in-depth analyses, statistical tests, more advanced tabulation and visualization that require data manipulation, R Statistical Software (v4.3.1; R Core Team 2023) was used. The survey data was used primarily to identify common categorical/discrete patterns across cohorts of journalists. As such, descriptive methods, such as heatmaps and distribution comparisons were the main approach to analysis. Chi-Square Tests of Independence

were performed, wherever possible, to evaluate the statistical significance of association between categorical variables, at $\alpha = .05$.

The interview transcripts were analyzed initially using QSR NVivo computer-assisted qualitative data analysis software. Using NVivo for an initial exploratory analysis, it was possible to visualize key themes and sub-themes across the texts of the interview transcripts. Figure 1 below visualizes the top-level themes identified in the

initial work with NVivo – representing only themes related to media and climate change specifically. While this was a helpful starting point for analysis, especially in visualizing the proportional size of themes, relative to other themes, clearly the interviews were led by the semi-structured questions used by all interviewers on the team. This meant that the themes present in the text that NVivo was able to detect in an automated way were dictated partly by the researcher-directed discussion.

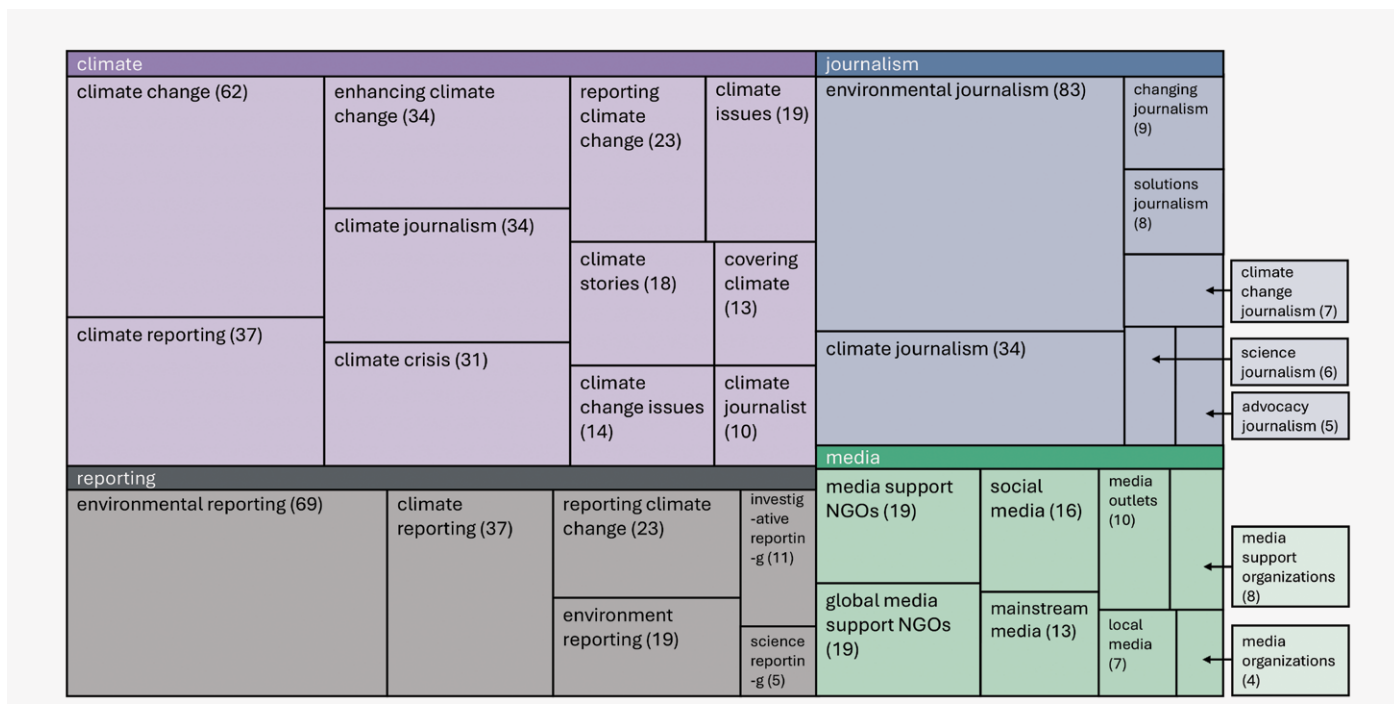


Figure 1: Visualization of initial exploratory analysis of interview transcripts highlighting themes related to 'media', 'climate change' and 'environment'. Numbers represent the number of coding references (individual mentions) of key themes

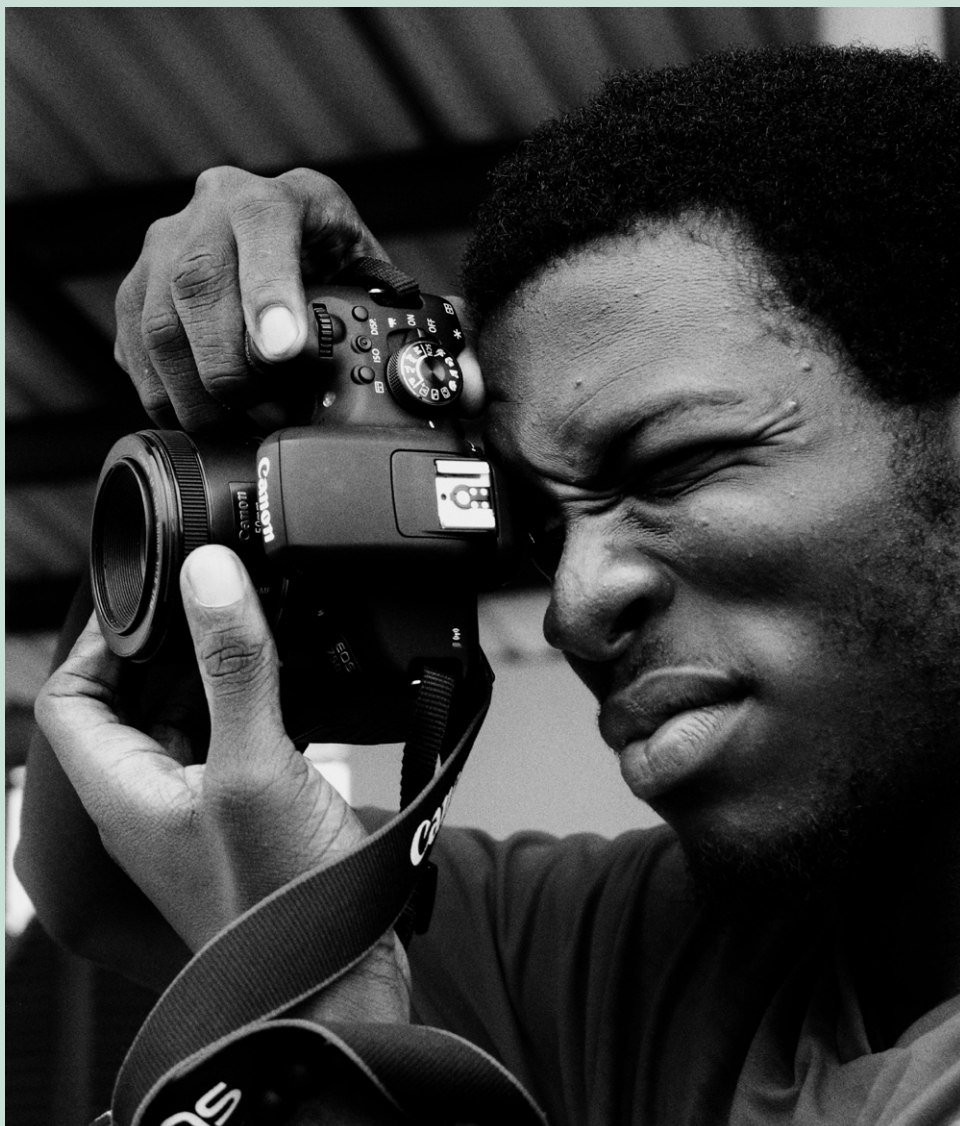
After initially using NVivo to highlight themes/subthemes and to organize the transcript material, the research then undertook a detailed manual thematic analysis of the qualitative interview data. Each team member read through all of the interview transcripts, inductively identifying and highlighting key themes addressed. As we undertook this process, we

met regularly to discuss key themes as these emerged from the texts to ensure inter-coder reliability. All emerging themes were discussed with team members before they were incorporated into the final agreed set of themes. These themes then led the structure of the present report. In the report below, we introduce quotes from journalists that most exemplify the themes identified.

Both the statistical survey analysis and the thematic analysis of the interview data sought to systematically identify, organize, and offer insights into patterns of meaning across the data set. We present below a synthesis of findings across the two data sources to provide answers to the research questions set out above.

5.

DEMOGRAPHIC CHARACTERISTICS OF THE STUDY COHORT



The respondent cohort for this study was made up of 744 survey respondents and 74 interviewees, totalling 818 responses in total across the two data collection methods. A few respondents undertook both the survey and the interview, however, as the survey was completed anonymously we did not establish and nor did we seek to correlate, which respondents undertook both. At both survey and interview we did establish the country of current residence of each respondent. The survey reached journalists in 102 countries³, while interviews were undertaken with journalists in 31 countries. The map below shows which countries the respondents to this research came from. It is clear that respondents from many countries did indeed undertake both survey and interview, with more survey-only responses in Africa.

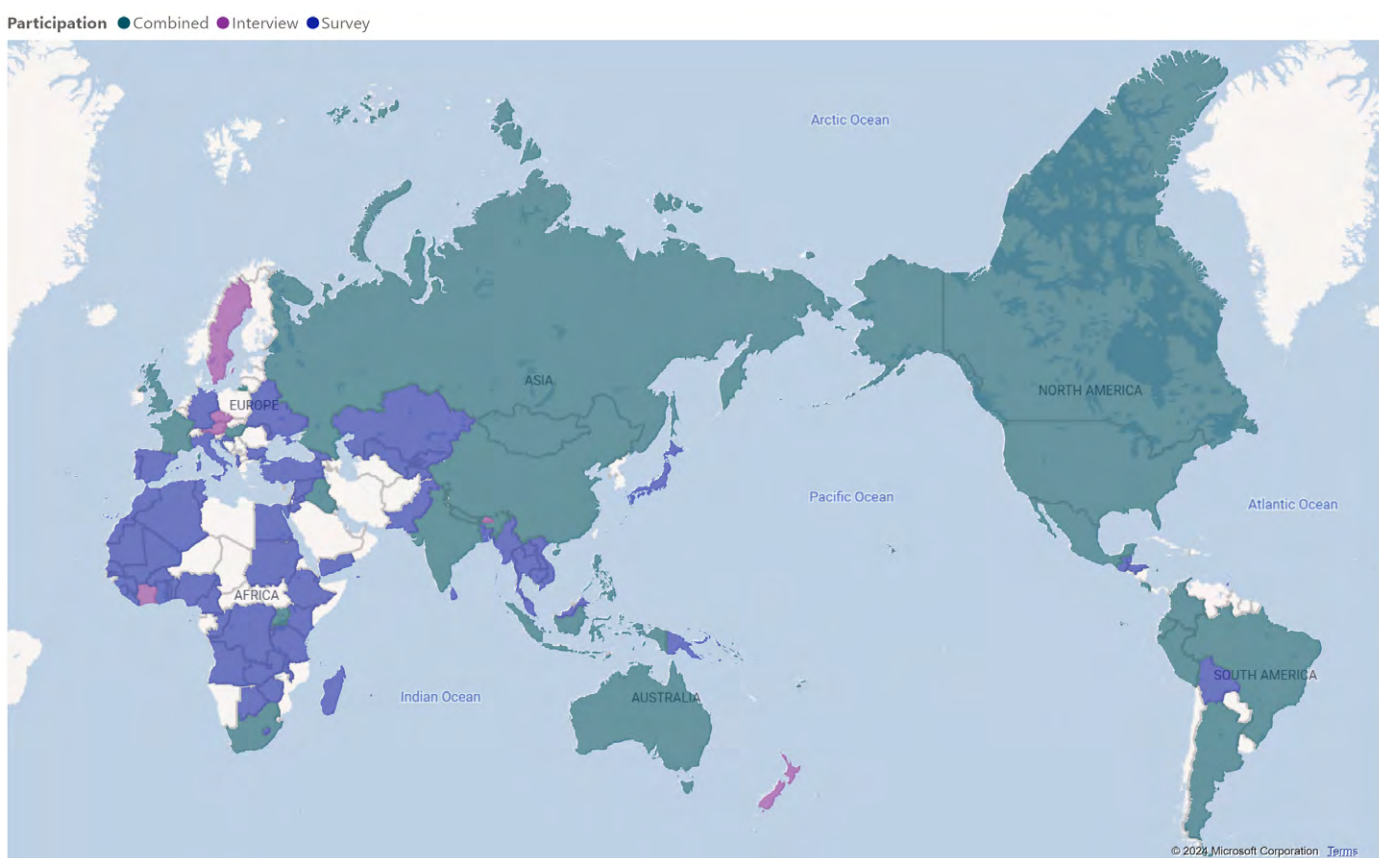


Figure 2: Map showing global distribution of the respondent cohort including interview-only responses, survey-only responses, and responses to both survey and interview

Survey-only responses (not survey and interview) were more common by journalists in African countries and African journalists made up the largest number of survey respondents. Countries with the highest participation rate for the survey were Tanzania (89 participants), India (72 participants), Kenya (53 participants) and the United States (44 participants).

³ Although survey responses came from 102 countries in total, four or less responses were received from the majority of countries. To organize and visualize data from the survey, given the difficulty of representing 102 country variables on every graph, we focused on the countries from which 5 or more responses were received for many of the data visualizations. Countries from which four or less survey responses were received are denoted as "Other Countries" and appear in some of the data visualizations where this is logical. A full list of the countries from which responses were received, including response numbers, is included in the Appendix.

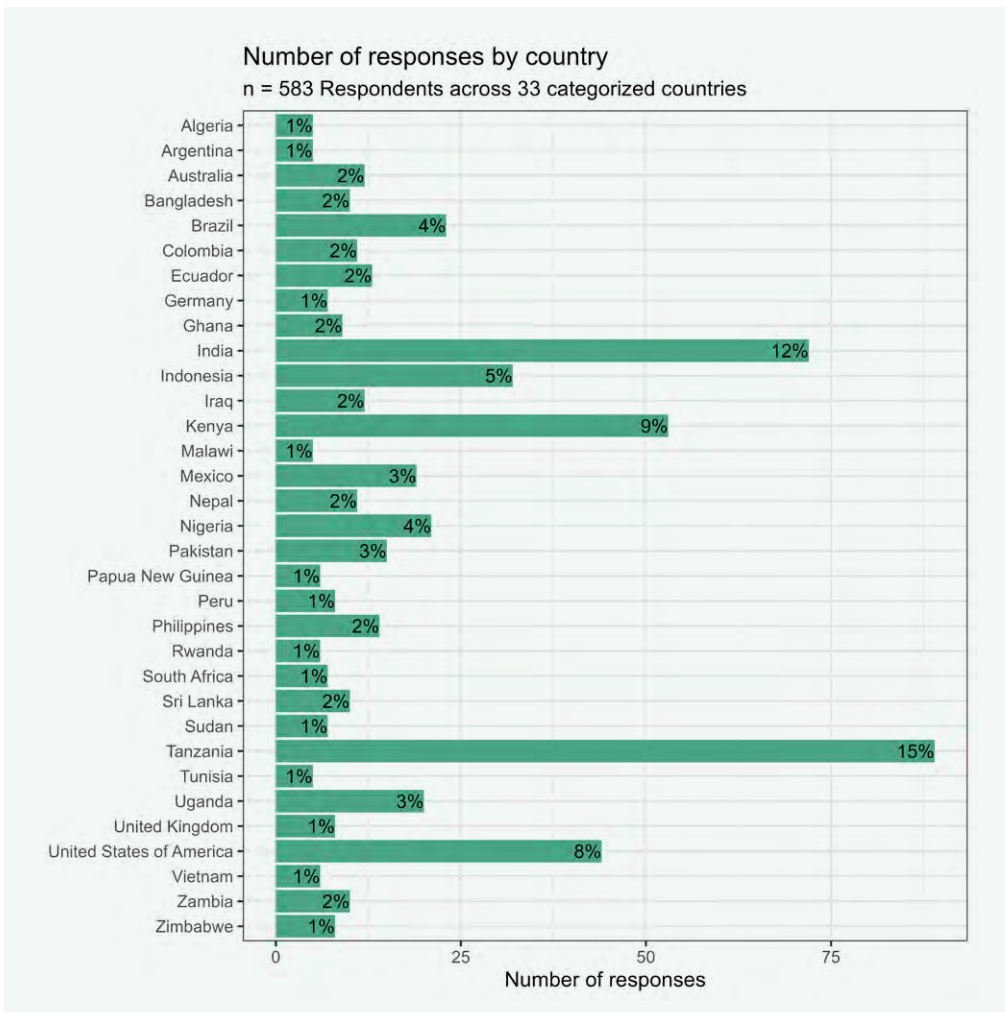


Figure 3: Number of survey responses by country, showing percentage of respondents for all countries from which there were five or more responses (33 countries)

In terms of response language, the majority of responses to the survey were in English (61.8%), followed by Swahili (14.8%), Spanish (6.9%) and French (3.9%). This accurately reflects the commonly used languages in the top response countries.

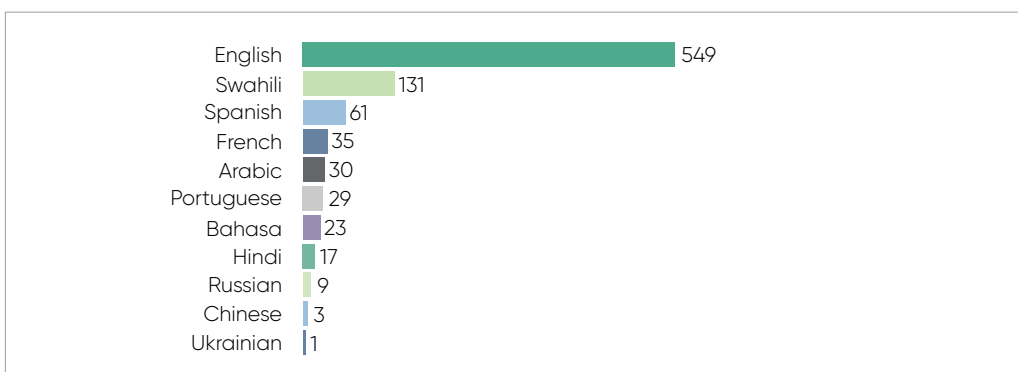


Figure 4: Number of responses in each of the survey languages

The gender of respondents to the survey was an uneven spread with the majority (56%) of participants identifying as men, while 42% identified as women. One percent of participants identified as non-binary, and a further 1% indicated that they preferred not to say their gender. The age range of respondents was broad, with the youngest participant aged 20, and the oldest, 75. This gave a mean age across the cohort of 39.4 years.

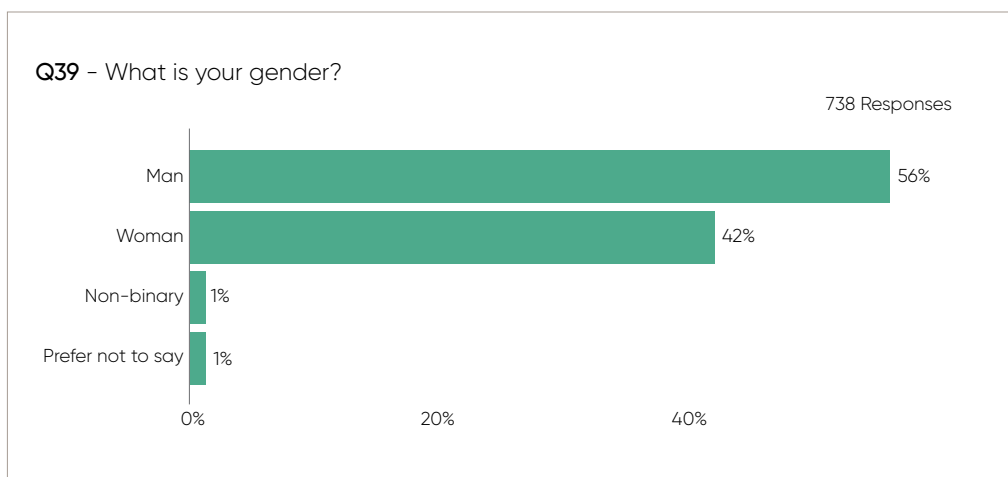


Figure 5: Percentage of survey participants by gender

Although all of the journalists or editors included in the study cohort at least occasionally reported on climate change or environment (as indicated by the initial inclusion/exclusion question), we wanted to know if any of the respondents were specialists in these subject areas. In response to the question: 'How would you describe yourself in relation to the range of subjects you report on', a large percentage of respondents (70%) identified themselves as generalists, while 30% saw themselves as specialists in this field. This accords with the research literature which has established that specialist climate and environmental reporting roles are relatively rare, globally.

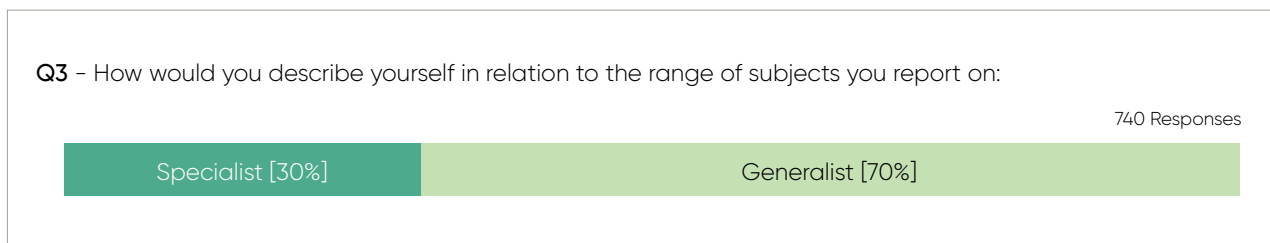


Figure 6: Survey respondents' self-described degree of reporting specialization

This large response by 'generalist' journalists who 'also cover' climate and environment was reflected in the data on how often respondents reported – or indeed edited – stories related to climate change or the environment. While 26% of survey respondents said they reported on climate/environment more than once a week, 41% of respondents reported creating stories on this subject matter much less frequently: on a monthly basis (20%) or six times a year or less (19%).

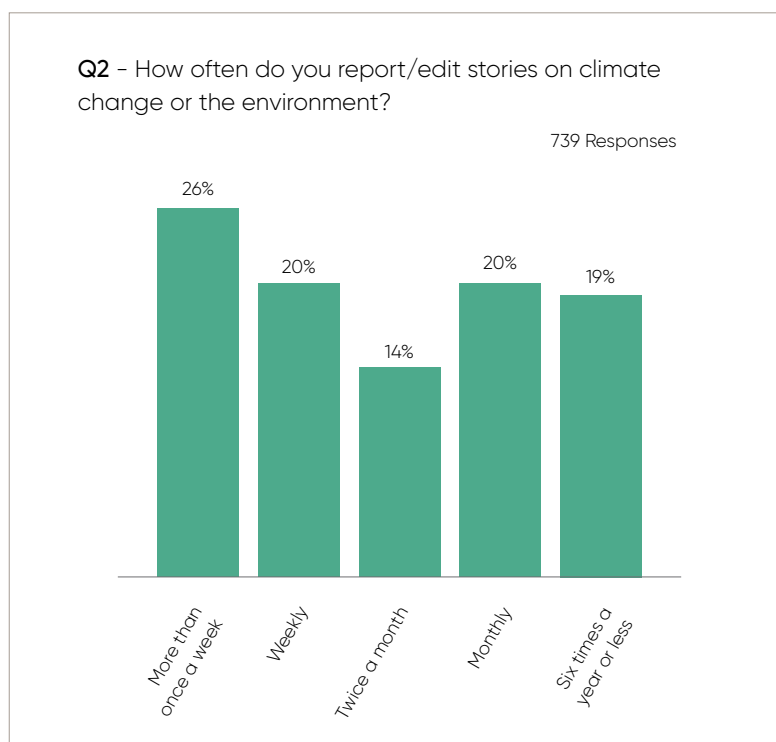


Figure 7: Survey respondents' self-described frequency of climate/environmental coverage

In terms of industry experience, the largest group of survey respondents (30%) indicated that they had been working as a journalist/editor for 5-10 years, while 23% of respondents had 10-15 years of experience. Only 7% of respondents had been working in the industry for 30+ years – perhaps reflecting the professional precarity and widespread journalist job losses that have resulted from the digital transformation of the last two decades. Newcomers to the industry (those with fewer than five years' experience) made up 15% of the respondents.

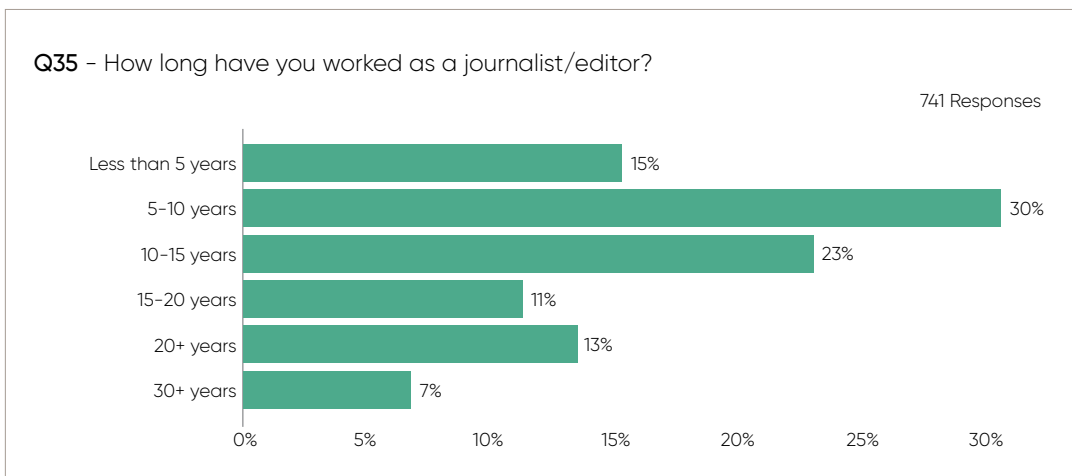


Figure 8: Length of time respondents had worked in a journalist or editorial role

The study was also interested in the nature of journalists' work in terms of their employment status and what kind of medium (or media) they worked in. Survey respondents were asked whether they worked 'in-house' as an employee of a media organization or whether they worked in a freelance role. Only a small majority (53%) of respondents indicated that they were employees of a media outlet, with 47% working in a freelance capacity. Given that freelance journalists and editors have less job security than those employed on an ongoing basis, this high proportion of freelancers in the study cohort likely also evidences the professional precarity that is discussed earlier in the report. Acknowledging that many journalists now work across several media, they were asked to select all the types of media they worked in. As might be expected, a very clear majority of respondents (68%) worked in the online journalism space, followed by newspapers (37%), and social media (34%). Interestingly 11% of respondents indicated that they reported via the currently growing medium of podcasting.

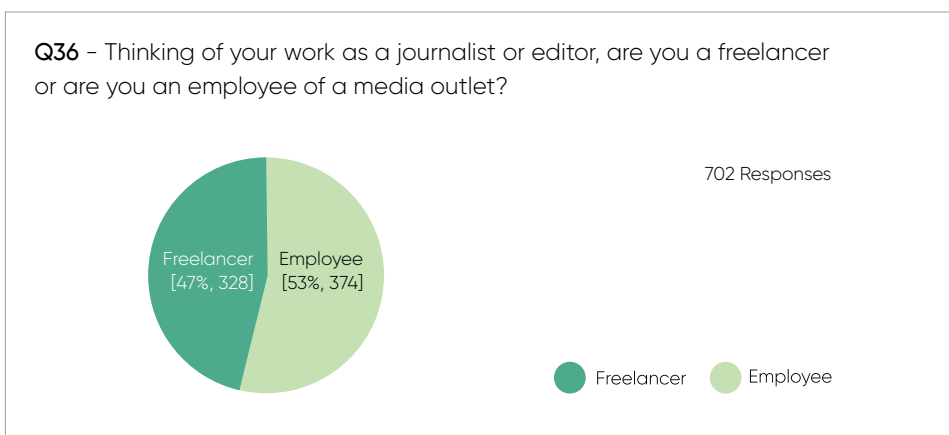


Figure 9: Survey respondents' employment status

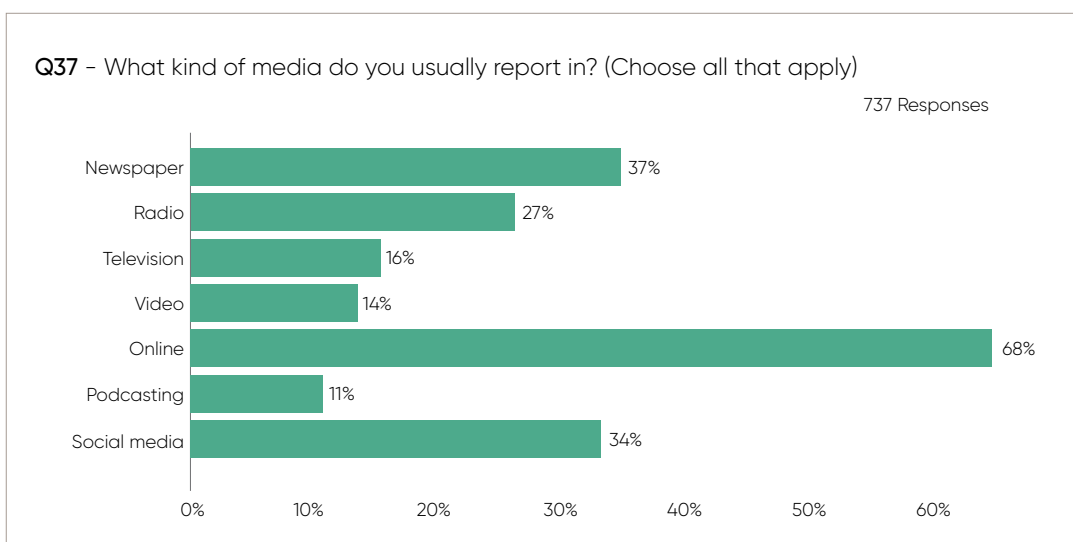


Figure 10: Survey respondents' reporting medium

6.

STUDY RESULTS



6.1 How much are journalists reporting on climate change and the environment?

The research literature tells us that news stories on climate change and the environment make up a small proportion of the total of news coverage, globally. However, there is limited data across a range of countries on what this proportion is. It does appear from research like the global MeCCO study cited above, that media coverage of climate and environment is slowly increasing. While it was outside the scope of the study reported here to undertake media content analysis to gauge the prevalence of climate/environmental stories, we did want to hear from journalists *themselves* as to whether they felt reporting on climate and the environment was happening more frequently.

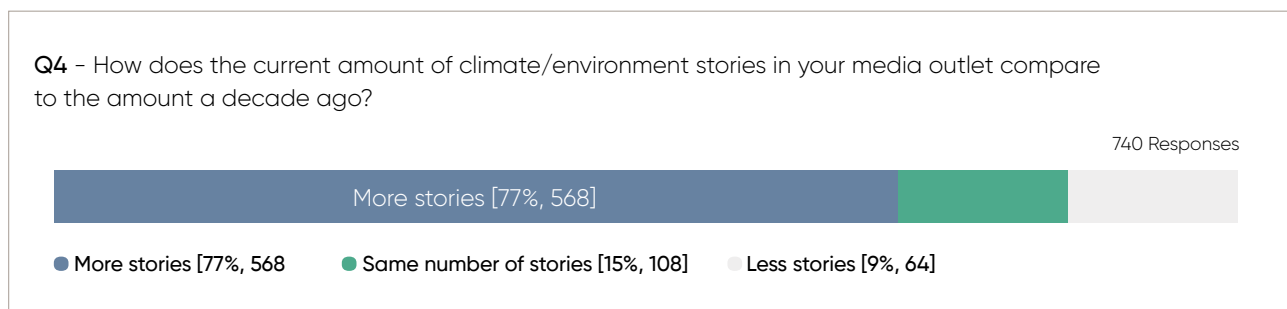


Figure 11: Perceived number of climate change and environmental stories compared to ten years ago

In the survey as well as the study interviews, journalists were asked their perceptions of the amount of media coverage on these subjects. A large majority of survey respondents (77%) said that their media outlet published more stories currently than they did a decade ago, while another 15% reported that the proportion of such stories has not changed, relative to a decade ago. Only 9% of respondents reported that their media outlet published fewer climate change and environmental stories than a decade ago.

Interviewees were also asked about their perceptions of a change in the amount of climate/environmental

reporting in their national contexts. Of 71 responses (three interviewees did not clearly answer this question) 57 noted an increase of reporting on these subjects over time. At 80%, this figure is similar to the survey responses, underscoring a widespread perception among journalists of an increase in climate/environment themes in the news. While journalists are not content analysts, they tend to be avid news consumers and most have an excellent understanding of what makes news in their particular news outlets and national contexts. We are therefore using journalists here as a reliable gauge of levels of subject-specific reporting.

Survey respondents who perceived an increase in climate/environment reporting were also asked to what they attributed the increase. Sixty percent thought the increase was aligned with a snowballing of environmental and climate change-related issues: journalists were simply reporting more because there were more problems. Other reasons for the perceived increase stood out less clearly. Only 18% of journalists thought coverage had increased because of increasing public interest in these topics (Fig. 12).

Q5 - In your opinion, what might have led to this increase in the amount of climate/environment stories?

556 Responses

Reasons of increase	Percentage
Increasing public interest	18%
Change in editorial policies	9%
Increase in environment related issues	60%
More media briefings by governments	6%
Contribution of media support NGOs	5%

Figure 12: Journalists' perceived reasons for an increase in climate change and environmental stories, compared to 10 years ago

Regarding the *prominence* of climate change and environmental stories in relation to other news, survey respondents overwhelmingly responded (82%) that reporting on climate change and the environment was currently treated as more important by their media outlets than it had been a decade ago (Fig. 13). Only 4% of survey respondents said that the prominence of such reporting had decreased.

Q6 - How does the current prominence (importance, relative to other news) of climate/environment stories in your media outlet compare to their prominence a decade ago?

736 Responses

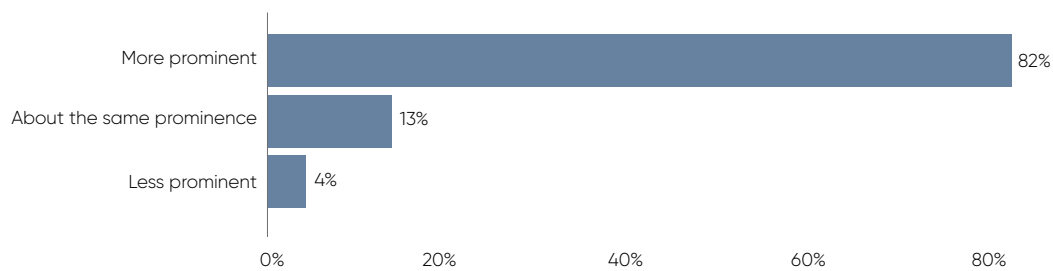


Figure 13: Journalists' perception of prominence of climate change and environmental reporting in their media outlet compared to ten years ago

Interviews conducted with climate and environmental journalists and editors provided further insights on perceptions of the amount and prominence of climate change and environment coverage in news outlets around the world. Asked if coverage of climate change and environmental stories had increased or decreased in their country, a clear majority of interviewees (calculated at 80%, as above) responded they had witnessed an increase. Many said they had seen this particularly in the last 5 years. However, as we discuss below, the complete picture is more complex than this.



Journalists' responses on the perceived increase included the following:

“...there are so many stories now. These stories [are] now no longer buried in newspapers. Some of them appear on the first page, you know, you find a story on the first page. It’s almost like a political story, but linked to climate change. It is a disaster story but linked to climate change. Yeah, that increase, it’s a big yes.” (Journalist, Uganda).

“It has exploded in the last five years. We went from there being barely any environmental reporters in sort of a dwindling field to now, I almost would say, especially if you look at job postings on Society of Environmental Journalists or anywhere else in the US...everyone is hiring climate reporters.” (Journalist, U.S.).

Coinciding with the survey results, most interviewees attributed a rise in coverage of climate change and environmental stories to an increase in frequency of environmental-related

issues, such as extreme weather events. Many journalists responded that climate change in particular is becoming progressively more difficult to ignore, for both journalists and the public, and that public interest in these stories is growing as a result:

“I think, if we’re talking about numbers, I think it’s increasing. Of course, yes. Because I think maybe the impact of global warming is also increasing, so people are more concerned about that.” (Journalist, Indonesia).

“...we have had in recent years, I mean, certainly in this past decade, we have had many, many severe extreme weather events, and people have realized that this will keep increasing, it’ll be more intense, and they’ll come back more often.” (Editor, India).

“I mean, I think it’s increased because climate change, it just reaches into so many of parts of our national life.” (Journalist, Australia).

A few journalists, though identifying an increase, felt that the issues of climate change and environment are still overshadowed by other issues and events in their specific national contexts. Comments that spoke to this notion included:

“In the last years, the covering of environmental topics has become more frequent and there is a little more interest from editors and traditional media. But the truth is that the covers [of newspapers] and the important spaces are always covered by politics, sports, violence, and so on.” (Journalist, Mexico).

“It is for our subject, as for many other subjects, that they [climate change and the environment] come perhaps a little in the shadow of major events in the world as it has been now after the pandemic and the Ukraine war and so on. And then the space is, nationally in Sweden, it’s issues such as gang crime that take a lot of space and energy from the newsrooms, which also affect the space for us to work.” (Journalist, Sweden).

Notably, some journalists based in Europe reported that while coverage had increased over time, it had more recently been overshadowed due to the development of the Russia-Ukraine conflict:

“From around 2018, there was a lot, I saw a lot of development in climate journalism as well. However, because of the beginning of the war in Ukraine, it all, you know, how would I say it, it has not completely stopped, but I don’t see any development since then.” (Journalist, Russia).

“...it was just like some topics we had to – well we didn’t have to – but yeah, we focused more on Ukraine, and everything else was kind of like you know, ‘too much information, we don’t need it right now’.” (Journalist, Czech Republic).

These kinds of responses confirm that media still prominently feature event-driven news (Soroka 2012) and that environmental news can often be overlooked in this event-driven issue-attention cycle (Downs 1972). However, events in relation to climate or the environment also undoubtedly drive news coverage. As one journalist from the Solomon Islands explained:

“I was the one who was responsible for climate change reporting [at my outlet], and also responsible for general stories and also religious, sports, and yeah, human interest stories. So, when there’s opportunity, I report on climate change, for example, during COP meetings, also regional meetings. During those meetings, those are the times that I report climate change. But after these meetings, I will switch back to other issues like politics or sports or religion.” (Journalist, Solomon Islands).

A few journalists mentioned that their own coverage of climate change and environmental stories had declined in the last 10 years – but for some, this resulted more from a shift in professional focus. One journalist from the Netherlands described shifting their career focus to economics to report on the financial aspects of climate change in the future:

“I’m actually covering it less. I started as a proper full-on climate/environmental journalist, and now I moved a bit more to investigative stuff. So, finances, etc. I’m still a pretty early career journalist, so for me, it’s a way to get knowledge in conducting financial investigations, and then I want to use that to cover climate. But for now, I’m a bit less in that domain.” (Journalist, Netherlands).

Notably, four interviewees from the Asia-Pacific region credited a perceived uptick in climate and environmental coverage to NGO support for media outlets and journalists in their countries. Media personnel from Indonesia and Fiji said NGO support and donations amplified climate change reporting specifically:

“A lot of Western donors’ money comes in, so it helps. Yeah. It helps with the amount of journalists, the number of journalists who are knowledgeable enough to do climate change, who get fellowships.” (Editor, Indonesia).

“And it’s also because of the funding that’s coming in through different organizations in terms of climate related issues, or climate related impacts, that’s also pushed for them to be able to address these stories.” (Journalist, Fiji).



6.2 Key topics in climate and environmental coverage

Existing research on climate and environmental journalism rarely seems to ask journalists, 'What do you report on?' With an opportunity to access a global spread of journalists, this study was intent on establishing what themes or topics journalists cover when reporting on climate change and the environment. In writing the survey, given its quantitative, multi-lingual nature, we were highly mindful to provide a wide range of response options, though we recognize that it was not practicable to represent all possible responses. To explain the themes they report on, journalists were able to select from 31 possible response options, choosing as many or as few as applied to their work.

The survey responses (n=744) revealed that 70% of respondents across the 102 countries report on climate change and environment from the perspective of 'health impacts'. Well over half (58%) of the respondents said they reported on 'deforestation', another 58% said they reported on 'water and sanitation', 56% reported on 'government policy', while 53% reported on 'plastic pollution'. Topics less commonly included in reporting were perhaps the more technical and legal aspects of climate change including 'carbon trade and offsets' (24%) and 'climate reparations' (26%) – however, given the large LMIC representation in the survey, it was quite surprising that the topic of climate reparations was not more widely reported on. It is possible that an alternative term like 'climate change loss and damage funding' may have garnered more responses, but climate reparations is an accepted term, broadly used in media (for example, Gostoli 2023; Slow 2023). Likewise, it is also surprising that the topic of 'fossil fuels and associated infrastructure' (32%)

was not one of the most covered topics, given that these are the key cause of climate change.

In order to understand what topics were most reported on in each country, we examined those countries that returned five or more survey responses against the full 31 topic response options. The top 10 topics by country are shown in the data visualization below (fig. 14). This graphic confirms that the theme 'environment, climate change and health' was the most

...the fossil fuel industry has run campaigns to put the onus for climate action on individuals.

frequently reported-on topic, and that 'government policy' in relation to climate and environment is also covered to some degree by journalists in most of the countries shown. 'Extreme weather events' and 'deforestation' are also included in the top 10 topics for the majority of countries. Interestingly, 'greenhouse gas emissions', the key driver of global climate change, seems to be reported less frequently than 'plastic pollution' – also a key environmental problem with increasing local impacts. Likewise, it is of note that the 'role of individuals' appears to be covered more frequently in reporting than the 'role of businesses'.

Given that business tends to have more capacity for mitigating climate and environmental impacts than individuals, this is also noteworthy. Though the actions of individuals in relation to climate/environment are

very important, it is also known that the business sector, especially the fossil fuel industry, has run campaigns to put the onus for climate action on individuals (Munoz 2023; Supran and Oreskes 2017; 2021). For example, the notion of the individual 'carbon footprint' is a concept constructed by advertising company Ogilvy and Mather for fossil fuel firm BP in 2004 (Solnit 2021). This concept has since been popularized—and criticized—for the way it seeks to shift the burden of action and responsibility from fossil fuel companies to consumers. If journalists and the media do echo these campaigns, they then perpetuate this discourse, which is intended to slow climate action.

A further point of interest in this data is that the topic of 'carbon trade and offsets' only appeared in the top 10 most reported topics in only one country out of 33 (Great Britain). We know that putting a price on carbon is considered by many to be the most robust mechanism available for reducing planet warming emissions, so it would seem a crucial topic to report on. Finally, the topic of 'humans' dependence on nature' was only in the top 10 topics in 4 countries, (Argentina, Bangladesh, Vietnam and Zambia). This notion, although arguably central to our survival on the planet, is not selected by journalists as a key topic within their climate/environmental reporting—although it could be considered a crucial point to make to audiences, and indeed a central theme for environmental journalism. Our data confirms, however, that this is a topic that is little covered by journalists who report on climate change and the environment.

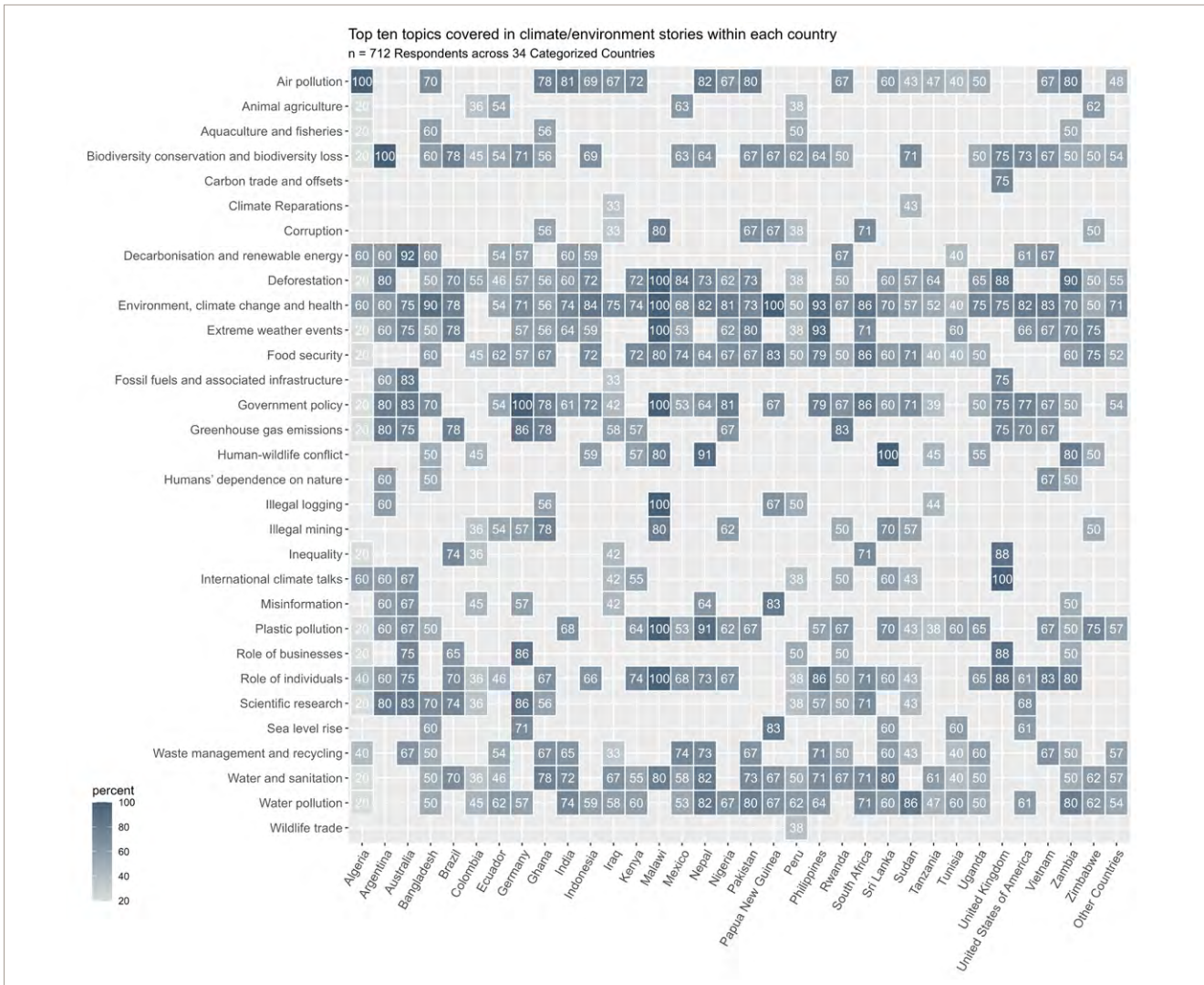


Figure 14: Top ten topics covered in climate and environmental reporting by journalists in 33 countries (plus all 'other countries' combined). Numbers represent percentages of selections within each respective country

Interviews helped to bring some further qualitative nuances to this data, revealing that many journalists, unsurprisingly, focus on topics of particular relevance in their local area, country or region. For some, this means placing emphasis on one or a few climate change and environment related topics, whereas others, while remaining focused on issues of national relevance, report on a wide range of topics:

“Of course, it’s also very much connected to the specific geography of a country. And I think in the Netherlands, you know, the awareness of water issues and water management is big enough that it naturally links to climate.” (Journalist, the Netherlands).

“Deforestation—it was a main issue. We did so many pieces about it. And deforestation, it’s a main piece in global warming.” (Journalist, Brazil).

“I cover business... of course... environmental issues, extractive industries, also Indigenous people, farmers, and related to human rights. I cover those kind of issues. Also, pollution, water pollution, air pollution, I also cover. So many stories, of course. Everywhere across Indonesia, since Kalimantan and Sumatra [are] about palm oil plantations destroying forests, palm oil plantations destroying Indigenous peoples’ area, and then mining also, coal mining, gold mining, nickel mining, tin mining.” (Journalist, Indonesia).

Most journalists interviewed for this study said they were not formally climate change or environmental reporting specialists, instead reporting on a variety of subject areas. However, a few interviewees said they focused on particular sub-topics, some because they worked for a specialized news outlet or department, and a small number because they held specialized positions or specialized as freelancers. Specializations in this study's interview cohort included: transportation, energy policy, climate disinformation, and fossil fuels. Many journalists also spoke passionately about covering climate change and the environment from a social justice perspective, often focusing on Indigenous rights and climate solutions:

“I’m always more concerned and curious about... what the community I’m in is feeling, or thinks is important when reporting on climate change. And I think it’s the responsible thing for me as someone who’s not from the north, and who is not Indigenous or Inuit themselves, to really just ask communities here and to center their voices in the global conversation, instead of maybe getting stuck in reporting on what, like, the federal government is doing.” (Journalist, Canada).

“I would say, there’s also been a lot of growth and understanding of what environmental justice, environmental racism are, and intersectionality of these various topics. And so you do see a lot more coverage of environmental justice topics.” (Journalist, U.S.).

“So, a lot of it is climate justice, because it’s very much linked to government involvement as well. For example, we have the construction of dams in the ancestral lands of Indigenous peoples. That’s a big environment story here. So, a lot of people are becoming more aware of environmental justice in

terms of environmental reporting.” (Journalist, Philippines).

Several journalists based in countries impacted by extreme events commented that these receive significant attention in national reporting. Many commented on the ability of such events to serve as a catalyst for journalistic interest in climate change and the environment, while others lamented a superficiality and ‘short-term-ness’ to disaster reporting:

“The media is consistent, in terms at least of its coverage of disasters, and the immediate aftermath of the disasters. There is little in terms of follow-up, but in terms of immediate, real coverage, as it happens, and when it happens, and at least in the few months, or few weeks, right after it happens.” (Journalist, Philippines).

“And flood and disasters...you know, Indonesia has a lot of natural disaster events. [Media coverage] usually spikes whenever there’s a disaster. But then goes down again after a while.” (Journalist, Indonesia).

Events and reports by international—and local—organizations such as the release of IPCC reports and the UN Conference of the Parties (COP) meetings, and national research publications were also seen to be a driving force for interest in climate change and environment-related topics among journalists and readers alike. COP meetings being hosted in, or having significant engagement by leadership of, journalists’ countries or regions was noted as especially significant for increasing the volume of climate reporting:

“I think it became a “celebrity topic”. A couple of years ago, when Fiji was president of COP [...] and

then after COP, they just sort of like maintained that hype, it was covered, newsrooms began to prioritize segments, to do climate reporting.” (Journalist, Fiji).

“When I first started doing climate and environment, I think the big stories were always the things that were predictable or expected—for example, COP United Nations climate change conferences, the IPCC reports, the kind of big global events that people were anticipating, or perhaps, you know, pieces of research from our local universities that were of interest.” (Journalist, New Zealand).

One Hungarian journalist—a specialist climate and environmental reporter—explained how IPCC reports particularly drove reporting on climate change in their country:

“I have no other topics, I just talk about environmental issues, climate change, try to explain how the things link to each other.. After the 2018, it was an IPCC small report, and the whole Hungarian media [was] full of it.” (Journalist, Hungary).

As mentioned, the fact that climate news is very much event-driven (whether extreme weather event, or climate governance event) has already been clearly established in existing research. That the COP events bring climate change into focus in media, internationally, has been noted by the MeCCO project—which tends to see a ‘spike’ in global media mentions of climate change in November each year at the time of the annual COP event. It is clear then, that ‘what journalists report on’ in relation to climate change is driven perhaps more by locally relevant topics and expected as well as unpredictable events, than globally-focused issues in climate and environment.

6.3 Making a global problem locally relevant

It is clear from the research literature (especially Scannell and Gifford 2013) that representing the *local* impacts of the global problem of climate change is crucial for elevating public understanding and engagement. However, climate change is an inherently global issue, and many environmental problems likewise surpass national borders. This global/local dichotomy in relation to climate and environmental issues was important to investigate in the current study. The research team wanted to establish *where* journalists focused their reporting.

It was clear from journalists' survey responses that they report on topics at a variety of spatial scales: there was no dominant trend (fig 12). The largest proportion (30%) of journalists said they were most likely to report on a national scale, followed by reporting local (town, district, province) perspectives (28%). At opposite ends of the spatial spread of reporting, global and community/hyperlocal perspectives were less reported on: 16% and 15% of respondents, respectively, said that they reported on climate and environmental issues from these standpoints.

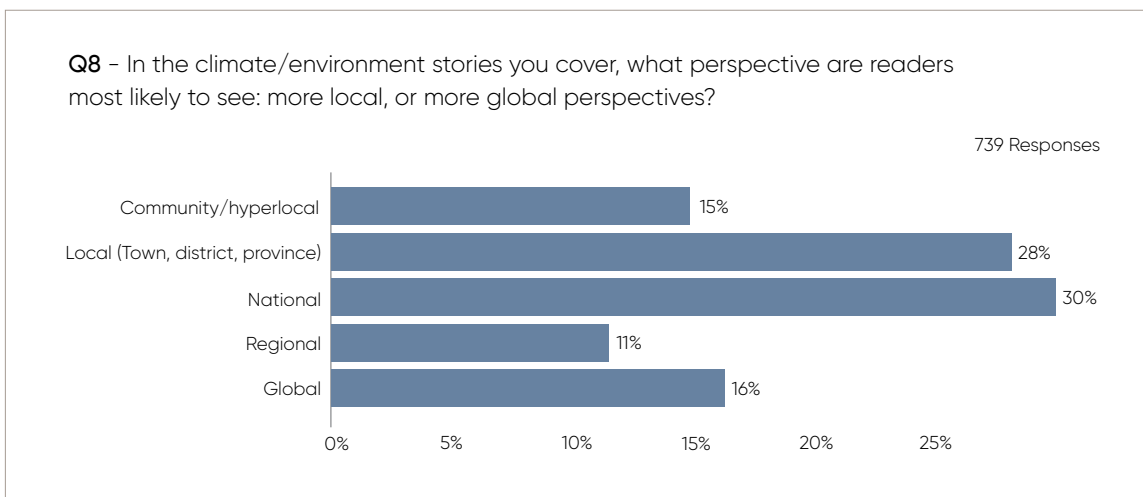


Figure 15: The spatial scales at which journalists concentrate their climate/environment reporting efforts

This spread both indicates that reporting of climate and environmental issues focuses on a variety of spatial locations, and that journalists are seemingly well aware that local/hyperlocal perspectives are important—with 43% focusing their reporting at local/community/hyperlocal scales, combined. Equally, national issues and interests seem to be a topic for much reporting. Such reporting may focus on national policy: as we have noted, 'government policy' was a frequently reported topic. While 'the national' will always be a focus of news in any country, the transnational nature of the climate problem may call for a diminution of national perspectives and an amplification of the global in media discourses about climate (Eide and Kunelius 2012).

A diver in a dark wetsuit is underwater, holding a large, clear mesh net filled with various pieces of plastic waste, including bottles and fragments. The diver is positioned near the surface, with the water's surface and reflections visible above. The scene is dimly lit, emphasizing the environmental impact of plastic pollution.

**...representing
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and engagement.**

Interviews revealed two central rationales among journalists for prioritizing stories of national and local nature. As expected, some indicated this made reporting tangible and accessible for readers. Journalists perceived more technical or theoretical topics to be generally less engaging for their audiences:

“I find that when we talk about the climate crisis, it’s kind of this big, abstract, overwhelming thing. [...] But when you can report on something, like this specific area of protected land, it feels like... you can kind of boil it down to something more specific and that can have power.” (Journalist, Canada).

“Water is related to almost everything in [people’s] lives, so you can start with water and then tell them how it relates to climate change, how it relates to local environmental change. [...] That’s a good starting point to explain to them about, not only the global environmental problem, but very local [issues].” (Journalist, Indonesia).

“I think there’s a big focus on national stories, but having said that, national stories that put us into global perspective.” (Journalist, Australia).

Others viewed local, community-level reporting as a way of reflecting people’s lived experiences of climate change or environmental harms, and of representing voices that are often not heard in national debates about environmental problems and responses to them. Rural or poor communities, women, ethnic minorities and Indigenous voices were cited as community segments that generally lacked representation in media coverage of climate and environment. This is borne out by research which shows that Indigenous voices (Callison 2017) and women’s voices in particular (Semujju 2015) tend to be marginalized in media reporting on climate. The inclusion of such voices, some interviewees said, was important for the credibility of climate and environmental journalism. Some saw more diverse representation of those affected by climate change and environmental injustices as indeed crucial to maintaining audiences for journalism more broadly.

“So it’s kind of a call for policymakers and also media persons to listen out to the people, to the experience of farmers and people who are on the frontlines of these disasters” (Journalist, Nepal).

“We have to talk to Indigenous peoples, we have to talk to Black people, to the poor people. And, you know, bring [stories] from the ground, and make the people on the base of the society, on the base of the pyramid, we have to make them feel represented because otherwise journalism is going to keep on dying.” (Journalist, Brazil).

To support locally-relevant reporting on climate and environment, journalists at some larger outlets rely on local reporters or stringers. At one large news organization this meant, for example, collaboration with a network of locally embedded colleagues across the globe. For another journalist, this took the form of working with local residents who were not necessarily journalists, but were trained to serve as ‘information brokers’.

For many journalists, linking local or national events to global phenomena is indeed routine. Climate change-driven extreme weather events (whether in their own locations or elsewhere) were noted by some interviewees as ‘teachable moments’ for educating readers about climate change. When reporting on local disasters, journalists said they did try to attribute extreme events to climate change and reference similar events elsewhere. One journalist referenced attribution science in particular, explaining how they drew on it to support their claims that a local event may be climate-driven:

“So, the attribution science is getting much more sophisticated, much more subtle and nuanced than it was even five years ago. And so, you can say, with some confidence, scientific confidence, that the phenomenon that California experienced with this insane flood, which came after years of drought, has been echoed in other parts of the world that are experiencing similar excesses of climate disruptions.” (Journalist, U.S.).

Attribution of particular locally-impactful events to climate change in media coverage has attracted some research attention in recent years. Although attribution studies are now happening much more quickly, even while such events are still in the news cycle, it is clear that not all journalists are confident or knowledgeable about how to use such studies (Osaka et al. 2020; Strauss et al. 2022). Instead, journalists may resort to generic statements about the increasing likelihood of extreme events, or, quote politicians or other authoritative sources who make the link between a given event and climate change (Painter et al 2020).

These kinds of research findings were also borne out in our interviews, in that some journalists did not feel they could attribute events to climate

change explicitly as such events were unfolding locally, for example:

“I do say that for example the drought in the Amazon is probably due to climate change, so I make that link. But as a journalist, I am dealing in facts, so I am not confident to link all kinds of events to climate change all of the time. I need to know the science before I do that. I do not always have access to that kind of science information.” (Journalist, Brazil).

While local and national topics tend to be at the forefront, then, some journalists reported leveraging stories from other countries in strategic ways, sometimes to fill editorial gaps, and other times to explore the relevance of other countries’ solutions in the journalists’ own contexts.

“Rather than grumbling about the inability to find local content, we supplement our editorial with good articles from anywhere. The advantage we have is our understanding that since the energy industry has almost similar challenges, solutions from anywhere will have a place here locally.” (Journalist, Bahrain).

“We don’t have the same problems, we have different problems,” one Austrian journalist explained, but looking at other countries’ solutions could be helpful in any national context, this journalist argued. “That’s how we get to climate solution stories.”



6.4 Reporting problems and their solutions

The research literature has not to date clearly substantiated whether framing climate and environmental news in terms of ‘problems’ or ‘solutions’ is more likely to catalyze change – however, as discussed above, the practice of solutions journalism has been shown to be more engaging to audiences. It may even inspire collective climate action and individual behaviour change (Their and Lin 2022).

One focus of the present study was to understand the prevalence of reporting that centers around ‘solutions’. Survey data (Fig 16) substantiates that a majority of participants – 72% – cover both, while only 17% of respondents said they covered problems only. This suggests that media reporting that discusses solutions to environmental issues is quite widespread. It is not

possible to ascertain from this data whether journalists discuss solutions for every problem—or only occasionally address solutions.

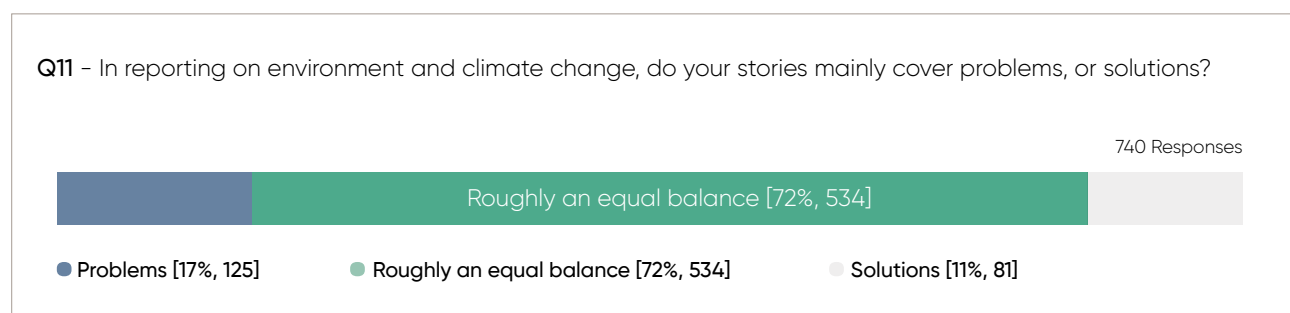


Figure 16: Perceived percentage of coverage of ‘problems’ versus ‘solutions’ in climate and environmental reporting

In interviews, journalists shared mixed attitudes to reporting on solutions. Many cited audience demand for more constructive and uplifting journalism, which they felt had the power to inspire and catalyze action. Some saw a ‘solutions’ lens as a way to counter the kind of ‘doomsday narratives’ that also stymie action on climate and environment.

“I think [solutions reporting is] a good protection against this inaction of apocalyptic narratives.” (Journalist, the Netherlands).

“I think that people are sick and tired of reading about missed targets and how we’re all screwed and that the sea levels are going to rise, and we’re all going to die in the dark. This is not a

framework under which we can motivate people to take action.” (Journalist, Canada).

“...when I have talked about solutions journalism with other people, which are not in media, for example, entrepreneurs, companies, and even authorities, they show very [great] interest in the term, because most of them have a very negative conception of what journalism is. But when you talk about solutions, they open their eyes, and say, ‘I never heard of what you’re talking about.’” (Journalist, Mexico).

Others, meanwhile, lamented what they viewed as a form of naivete around ‘solutions journalism’, and a lack of maturity in its practice. They were not opposed to journalists reporting on “solutions” but stressed that such coverage needed to avoid over-optimism about the feasibility and efficacy of any one solution, on the one hand, and to apply good journalistic practices of rigor and nuance, on the other. This aligns with the point noted in this report’s literature review, that journalists, and audiences, do not always necessarily understand what is meant by the concept of ‘solutions journalism’. Journalists interviewed in this study also noted that for reporters to develop sufficient skills and tools to conduct rigorous reporting on solutions, would cost the profession time and resources:

“And I really can’t stand the word solutions journalism, because of course, it’s not a solution, it doesn’t stop everything. But it is response journalism. [...] And overall, in the big picture, I think we need to start applying the same journalistic rigor to the responses to climate and other degradations as we do to identifying the villains.” (Journalist, U.S.).

“You see a lot of this kind of half-baked “solutions coverage” in climate reporting.... I’m not sure solutions journalism was a full-fledged idea a decade ago when I started on this.” (Journalist, U.S.).

“Whether it enables the kind of more in-depth solutions journalism that actually points toward a way out of it, in an evidence-based way as opposed to advocacy, that’s more complicated, because... it needs more time, it needs more resources, it needs more expertise, more experience with subject matter.” (Journalist, Canada).

Lastly, some journalists flip the question on its head, and see reporting on the systemic and interrelated drivers of climate change and environmental degradation as a critical path to imagining and enabling solutions:

“We try to uncover climate change enablers and systemic causes that are making this crisis progress, basically. So that ranges from companies to states not implementing regulations the way they should, companies not respecting them, victims impacted by extractivism operations.” (Journalist, France)



6.5 Obstacles and enablers to reporting on climate and environment

Journalists were asked at interview to discuss what enabled the range of factors – both internal to the newsroom and outside it – that helped them to cover climate and environment more frequently and better. Conversely, we also wanted to know about the obstacles they experienced in undertaking this work. As discussed in more detail in the following section where we report survey data, journalists in both high income countries and LMICs told us that organizational resources and job security were both the most important obstacles – and when reversed, the most meaningful enablers. Journalists in the USA and Australia told us:

“I would say, what helps me do my job better is when I feel like I have good job security, fair wages, and I have the support of my organization to really take time to understand, work, and write stories that are layered and add all the context. And again, I really think that can only happen when you are working for an organization that’s paying you a living wage and you feel like you’re not going to lose your job tomorrow.” (Journalist, U.S.).

“I think that the, in general, kind of tumult of the journalism industry, is hard. There’s a lot of turnover. There’s a lot of turnover in our managers, we have different people telling us to do different things. We have conflicting directives: some years, we’re told that we’re focusing, you know, on video, and every reporter needs to go out and take videos this year.... And so it’s kind of this whiplash of where news organizations are putting resources, like what we’re being told to do. And that is very challenging”. (Journalist, U.S.).

“I think the main one is resources. I mean, like I said, up until a few months ago, there was no climate team at [media outlet redacted] or any resources really, like I always had to hustle to get stuff done. Beg, borrow, steal. That has changed somewhat with the creation of this climate team. There does seem to be a willingness of people to give us resources and help within the organization, feels like there’s a bit of a change in attitude.” (Journalist, Australia).

Several journalists also mentioned that without adequate resources, they could not travel to the often quite remote places where the most important environment stories were unfolding. As one journalist from Uganda explained:

“If you want to do a good climate story, you have to go to local communities. But most of these communities are not just in the city where we are, but they are far off. We want to go to Southwestern Uganda, you want to cross to Congo, and do interviews and talk to those people who are affected. The big challenge is how to access... the affected communities.” (Journalist, Uganda).

Physical dangers were a key obstacle experienced by many journalists in country contexts all over the world, but especially in LMICs.

“Sometimes, if you are working on a sensitive topic—for instance, there are some forests that normally people shouldn’t be there. But while investigating, you can find like some companies there that are doing bad thing[s]. And that can lead to a sort of threat, or you can be arrested, too.” (Journalist, Cote d’Ivoire).

Audience interest – or relative lack of it – was also noted as a key obstacle for climate and environmental reporting. Indonesia was a location in which this theme arose several times:

“Climate is still a peripheral issue for the people, and also for the media. Sometimes it’s quite difficult to make sure in the newsroom that this is very important for the people. Sometimes it’s quite difficult to find the headline for the issue or for climate change because the people, also the newsrooms, still think that climate change is the peripheral issue, not the main issue.” (Journalist, Indonesia).

Finally, the need to connect climate and environment stories with other stories in the news was cited as crucial. As ‘every story is a climate story’ journalists need to collaborate and cross-reference so that they are not reporting in a siloed way. As one American journalist explained:

“Even if a paper does have an environment or climate reporter, they’re kind of isolated, you know, and in reality climate affects every other part—culture, sports, business, and so forth. So, this compartmentalization of where you, on the one hand, you have your business reporter sort of cheerleading the latest “wow, the Colorado economy grew by three and a half percent last year”, and then the climate reporter’s saying, like, “new development is destroying the forest that we need to solve the climate crisis”. And somewhere it seems like they should be talking to each other and figuring that out.” (Journalist, U.S.).

The journalists who were interviewed for this study coincided in naming many of the obstacles and enablers for their work. These have been summarized in the following table.

Table 1: Obstacles and enablers for climate change and environment journalism.

Obstacles:

Lack of funding to do investigative work/fieldwork with 'affected communities'

Lack of access to scientists and locally-relevant science data

Limited capacity to verify data and information

Lack of newsroom support

Audiences' news avoidance

Lack of audience interest/understanding

Threats, security, dangers of remote travel

Media ownership dictating editorial direction

Misinformation/disinformation and greenwashing

Language barriers when reporting in different countries

Foreign-owned extractive industries banning access to sites

Siloed nature of subject-specific reporting

Not enough support from editorial leadership

Not enough interest from audiences/the public

Enablers:

Job security, fair wages

Resources, grants, training

Resources for travel

Access to scientists/expert sources

Support of a media organization

Collaboration with other journalists

Specialist reporting roles

Data journalism training for climate and environmental reporting

Fellowships and mentorship

Open source tools: for example, for mapping

Diversity in journalists, bringing different viewpoints

6.6 What do journalists need to help them report more effectively?

As noted in the section above, more funding is an absolute priority, and an enabler, for the work of reporting in climate change and the environment. When asked 'What do you and journalists in your country need to increase capacity to report on the environment and climate change?' 80% of survey respondents cited the need for more funding. This was closely followed by the need for in-person training and workshops (75%). At the other end of the scale, those factors considered the least necessary by respondents were more media freedom (36%), more interest from audiences/the public (35%), and better safety when working (34%). While it is alarming to consider more than one-third of respondents do not feel safe enough to do their best work, it is nevertheless worth highlighting that concerns over funding and training far outweigh issues of safety or media freedom among this survey cohort.⁴

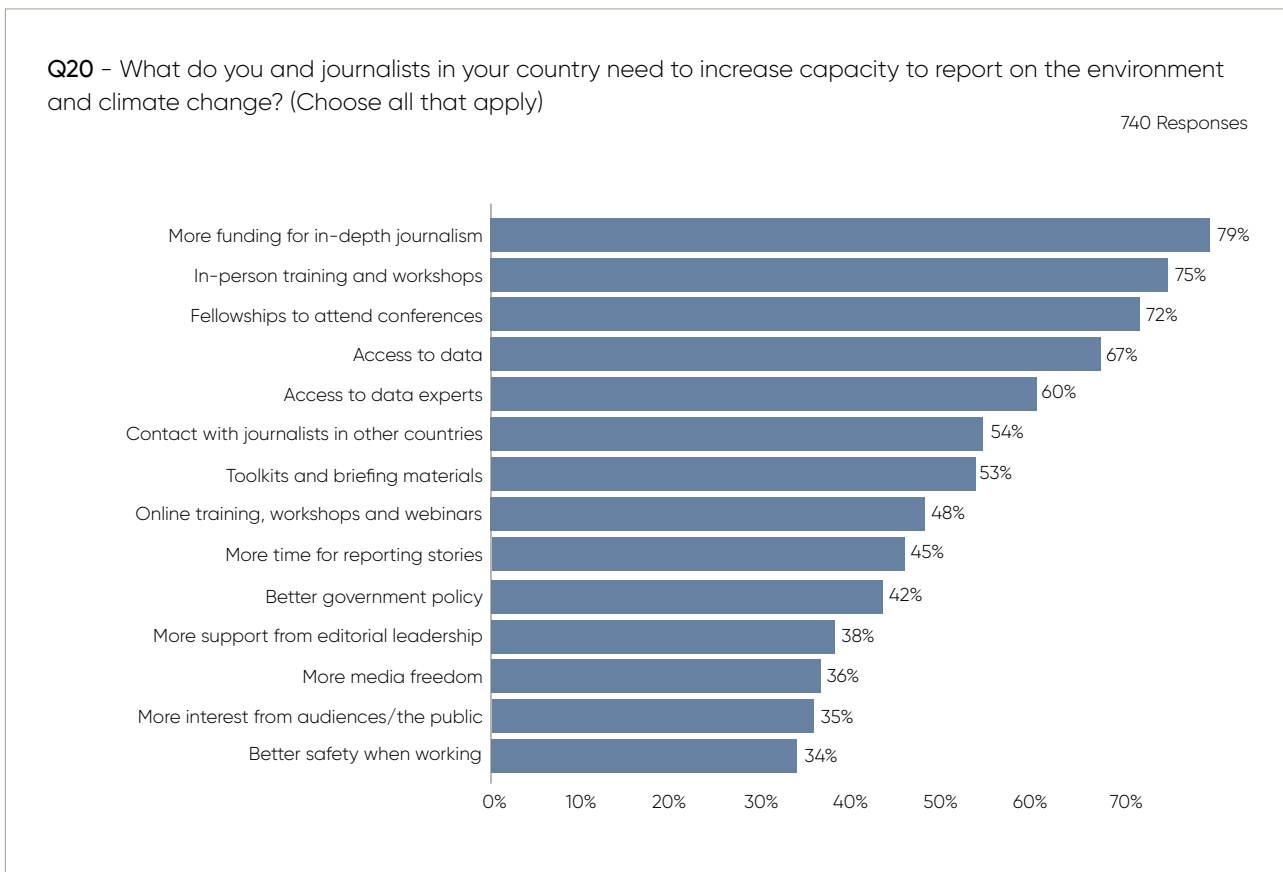


Figure 17: What environmental/climate reporters say they need to do their jobs better

⁴ To further interpret how safe, or in danger, journalists feel when undertaking their work in different national contexts, additional detail is provided in section 6.7 where 'threats by country' are shown alongside the 2024 World Press Freedom Index.

Many interview participants were also quick to emphasize the need for greater funding and resources—both in terms of a living wage that enables journalists to remain in the industry, as well as funding to cover the costs associated with quality reportage. It is crucial to underscore, then, how interlinked job security and a media outlet’s viability are. On the former, one U.S. interviewee stated:

“I think there’s a lot more pressure, when you’re facing economic insecurity, to try and write a lot of quick hit stories that don’t really do justice to the issues that you’re trying to advocate [for]. But to me the best way to support more environmental journalism is just guaranteeing the availability of secure, well-paying jobs.” (Journalist, U.S.).

Similarly, one Argentinian interviewee said “most of the journalists – I think every journalist that I know – have two or three jobs, because you need to have two or three jobs to make ends meet”. Funding and resources were considered especially important to help support travel costs given many environmental and climate change reporters had to leave the confines of the newsroom and report from the field – whether visiting areas of illegal deforestation in the Amazon, or to the frontlines of the Russia-Ukraine conflict to investigate accusations of environmental war crimes. A journalist-interviewee from the Czech Republic summarized the importance of such funding:

“...then we can really go to the places and not just do it from a desk or just like calling people. It

really helps. And it makes not just the experience for the journalists better, but I think definitely you can see it in our reporting that that person was really there.” (Journalist, Czech Republic).

There was some discrepancy between the survey respondents and interviewees on the relative importance of perceived audience interest and also the level of support within newsrooms from editorial leadership. In the survey, journalists selected these as the two least influential of the factors needed to enable climate and environmental journalism (at 38% and 35% respectively). Despite this, both themes regularly emerged in the interviews as crucial to climate and environmental reporting. One interviewee identified how audience interest and editorial support were closely linked:

“I think editors need to put faith in their audiences that they can grow to care about these issues. We’re sort of in this dangerous death cycle where editors turn down climate-related stories on the assumption that audiences don’t care, but without realizing that perhaps part of the reason why audiences don’t care is because they’re ill-informed, or don’t appreciate, or haven’t had the opportunity to appreciate the significance to themselves. So, I think having a bit more faith in our audiences, and also appreciating that we need to start somewhere, raising awareness about these problems, would really help. (Journalist, New Zealand).

On the topic of editorial support (or lack thereof), one interviewee similarly noted:

“First of all, I think everyone must be on the same page to believe this is important. So, I think the director of the newsroom, the people have [to] think this is important – ‘oh, we’re going to put that in the day-to-day in coverage, and we’re going to do more about it’.” (Journalist, Brazil).

The need for a whole-of-newsroom approach and concerted strategy for coverage of climate change and environmental issues was another strategy for better climate/environment coverage that was frequently raised among the interview cohort. As one reporter put it:

“...we need to somehow let editors know that climate change [reporting] isn’t about telling one guy to do the stories, it’s about keeping that in mind because it’s in the mind of the readers, and trying to create a strategy not only for that guy to write stories about climate change, but also how we can improve the quality of our climate change coverage.” (Journalist, Costa Rica).



A need for greater resourcing was reflected elsewhere in the survey data. In another survey question, respondents were asked: 'What factors limit the frequency or depth of your climate/environment coverage?' Here, by far the most common response (76%) was, again, lack of resources. In journalists' answer to this question, there was a large gap between this and the next most selected limiting factors: level of public interest or understanding (34%), lack of information (33%), and lack of subject expertise (33%). This seems to substantiate quite clearly what journalists reported elsewhere in this study: that lack of funding and resources to do their job is indeed the most limiting factor for journalists who cover climate and environment.

It is worth considering in more depth, however, that perceived audience interest in stories about climate change and environment is also thought of by journalists as a factor limiting more coverage. Generally, media have become more concerned with audiences and how better to engage them in the changed media landscape of the digital transformation, as they have tried to make newsrooms more financially sustainable. Research does indicate that journalists, broadly, think they know what audiences want. This may vary from "educated guessing" in less technologically equipped newsrooms, to real time tracking of audience interaction with online news content on digital news platforms (Nelson 2021). We do know that there is a high level of public concern

worldwide about climate change particularly. For example, the 2021 People's Climate Vote study (Oxford University/UNDP 2021) found 64% of people in 50 countries – including in LMICs – regarded climate change as an emergency. Given these figures, there may be a discrepancy between our journalist cohort's *perception* of public interest in climate/environment coverage and actual public interest in many locations. This study is not able to answer questions about audiences, only about journalists' perception of audiences – however the climate concern figure cited above suggests that audiences may be more interested and concerned, and therefore receptive to reporting on climate/environment than journalists perceive.

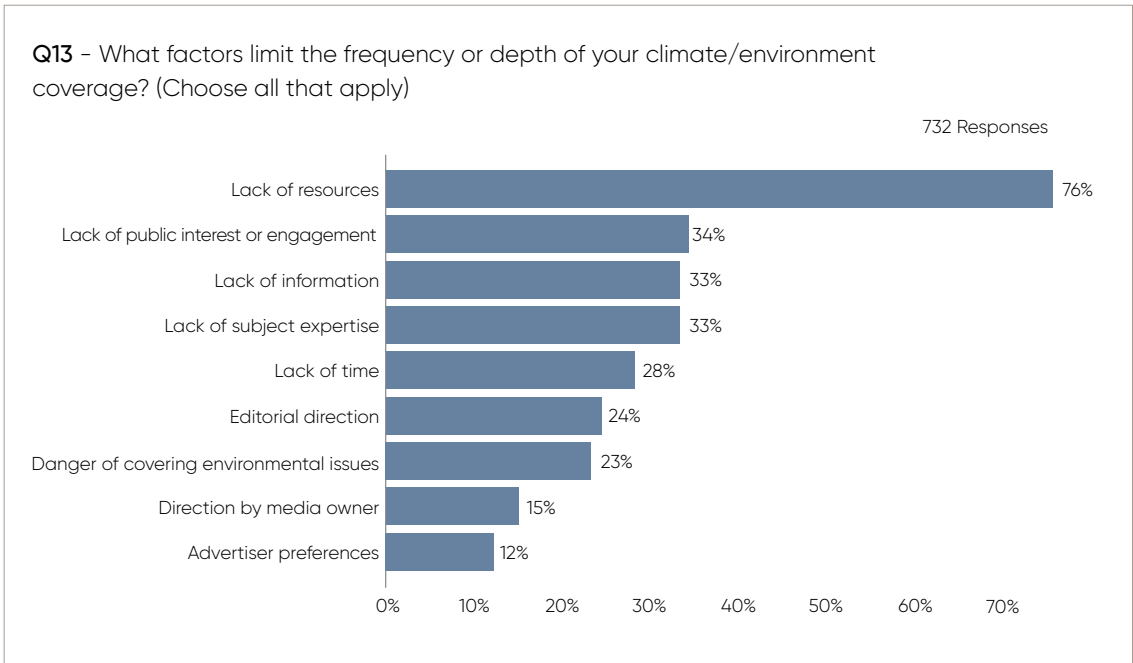


Figure 18: Factors limiting the frequency and depth of coverage

Respondents to the survey noted that they lacked 'subject expertise'. Elsewhere, 75% of the survey cohort identified a need for in-person training and workshops. This subject expertise 33% of journalists said they were missing could be provided through expanded training opportunities. We therefore asked journalists to detail exactly in which areas they felt the most need for learning and training. Journalists were again provided with 31 discrete categories, and they were

able to choose all areas for training that they felt were most relevant to them. Fifty percent of respondents cited environment, climate change and health; and 50% cited decarbonization and renewable energy as the leading subject areas in which training was needed. Several interviewees also identified how in-person training and workshops could provide the added benefit of encouraging journalists to form peer networks and explore opportunities for collaboration.

Q21 - What kind of topics and thematic areas related to climate change and environment do you most need training on? (Choose all that apply)

726 Responses

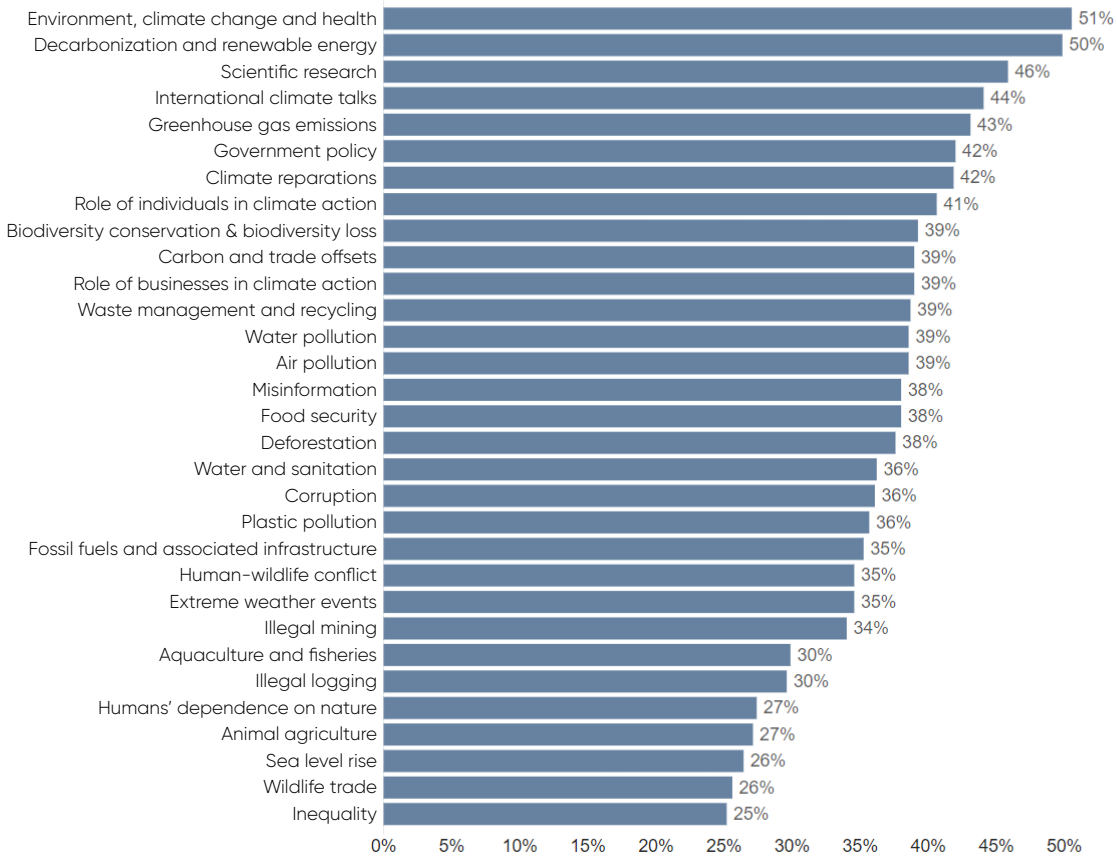


Figure 19: Topics on which environmental/climate reporters feel they need training

Another important element required by environment/climate journalists to do their best work is access to data, and government transparency around information (Fig. 17). This need was identified by 67% of survey respondents and regularly raised during the interview process across both high income and LMICs (as attested to by the interview quotes included in Table 2).

Table 2: Interview quotes relating to access to data and government transparency

Country	Quote
Australia	"It drives me crazy. The control over release of information is just bonkers ... I think governments just have this kind of reflexive idea that 'don't release information, that could hurt us in some way'."
Bahrain	"...we have always had this complaint. Finding data—quality data—of course, that's all with the government. So, if you want to have data about, say, the past environment, the past climate in the past year, it's not easy for us to go and get that data."
Brazil	"Sometimes it's hard to get data from the government. And during the Bolsonaro government it was especially hard to get transparency, to get correct data, to get people to talk to you, because they were not at all transparent."
Canada	"Canada is awful in some ways, but the one that sticks out to me is lack of access to public information ... I really do look forward to the day where you can be like, 'that's a good idea for a story, let's go online right now and check and see if that data will pan out.'"
Indonesia	"... starting like five years ago, it's really difficult to get a hold on official data anymore. I've tried numerous times to reach out to government officials and ask them for data and they basically just ignored me."
Poland	"In Poland, the ministry of climate just barely responds—they usually don't respond, and then I have to follow up with 'Hey, according to press law, you're obliged to respond', and then they respond. But otherwise, not really."
United States	"This is all paper, it's all documents. It's not just sourcing of someone you meet in the dark room. And we can't access those because, although we are legally allowed to get them, government agencies across the United States are slow-rolling or outright blocking. And the only way to get them is if you threaten them with a lawyer..."



Finally, in order to better understand journalists' relative training needs by country, we focused on the top 10 needs for training that were named by respondents across 33 countries, as well as all 'other countries' considered together. Again, we see the theme of 'environment, climate change and health' as a top-cited area for training across most countries, with 'decarbonization and renewable energy' also a key theme across 29 of the 34 country categories. Countries in which journalists listed the most areas for training – signifying a widespread need for learning on central themes in climate and environmental journalism – were Papua New Guinea, Vietnam and Pakistan.

Of interest is that some themes seem not to be regarded as top training areas for journalists even though they contribute so prominently to

environmental harms and climate change. One such theme is 'inequality' – which was only elected as a 'Top 10' theme by journalists in four of the 33 countries shown. This either suggests that journalists are already well versed in the unequal responsibility and share of the burdens of global environmental harms, or, they may not identify the links between inequality, environmental degradation and climate change. If the latter is true, it suggests journalists in many countries need more training in the concept of climate justice. Another such theme is 'animal agriculture'⁵ which is a significant source of greenhouse gas emissions and land clearing, and as such, an important driver of biodiversity loss and climate change (Eisen and Brown 2022).

However, few journalists name this area as one in which they need training. Furthermore, recent research has noted that journalists in many countries are not representing animal agriculture's contribution to climate change accurately, in line with science (Saville et al., under review). The results shown here suggest that there are themes central to environmental and climate problems that journalists may still not cover frequently, and consequently, they may not feel the need to build expertise in these areas.

⁵ Animal agriculture was the subject of the Earth Journalism Network's 2022 Special Report 'More than Meats the Eye', which can be found here: <https://earthjournalism.net/more-than-meats-the-eye>

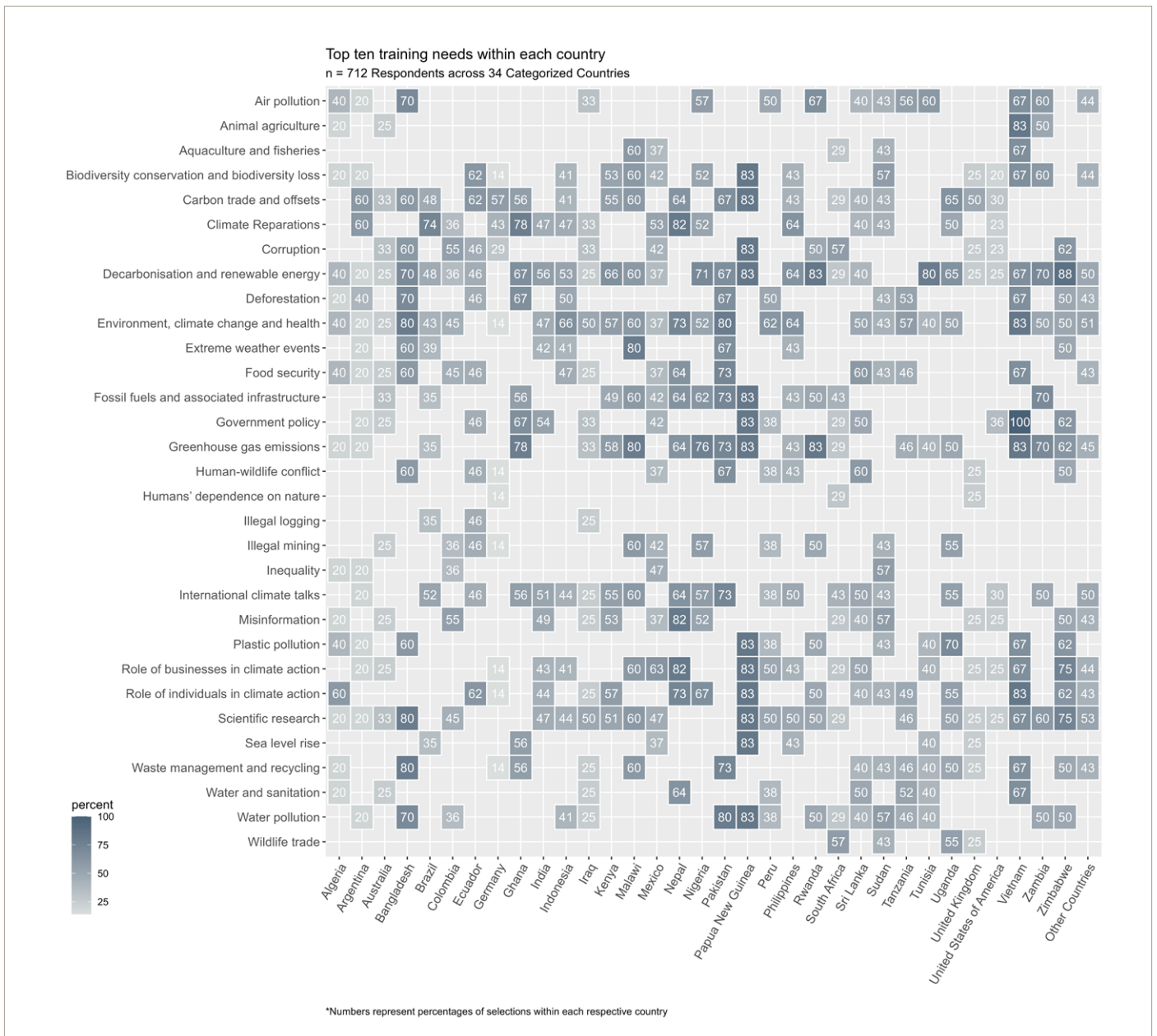


Figure 20: Themes in which journalists in 33 countries (and all other countries combined) said they needed training. The top 10 themes per country are shown. Numbers represent percentages of selections within each respective country

6.7 Dangers, threats and self-censorship

As the research literature tells us, reporting on the environment often brings journalists into the path of actors whose primary driver is to extract resources and make profit – including when those actions are carried out illegally. Much of the danger to journalists reporting on climate/environment comes from the locations that they work: these are often remote or rural contexts with limited, sometimes corrupt, state presence. Here, journalists may cross paths with criminal or other ‘bad actors’ who would prefer not to be under the ‘watchdog’ focus of journalism. Such dangers are of course present in other reporting beats, however, a financial or politics reporter, for example, may rarely travel outside a city and may therefore be more buffered against direct threats to their safety. A journalist working in rural, often lawless contexts, with little policing and or civilian witnesses willing to speak out may find themselves in a role not dissimilar to that of the war reporter – which is of course the most dangerous beat. And the threat to journalists is not exclusive to countries where media freedoms and the rule of law are less established. For example, a study of Finnish journalists identified environmental issues, together with coverage of immigration, religion, racism and gender equality to be “trigger subjects that generate threats and harassment” (Hiltunen 2017, p. 69).

Reporting on environmental harms puts journalists in danger in many parts of the world. In the study survey, we asked journalists in detail about the dangers they faced, and although we did not ask interviewees specifically whether they had been in danger doing their work, several volunteered this information. One Peruvian journalist had been kidnapped when reporting in the Amazon and working with Indigenous people there, an Indian journalist reported frequent incidents of sexual harassment, and a journalist from Ecuador told us they had been threatened and legally harassed as a result of their environmental reporting. The often-remote nature of the work and the need to be on the ground after natural disasters can also make the work dangerous – more dangerous still are the powerful interests journalists uncover, investigate and reveal for their audiences. Another tactic used against journalists can be untrue or defamatory statements about them, or labelling of journalists because of their reporting. One journalist interviewee from the Philippines described a phenomenon in that country of “red tagging”, where those who “defend their beliefs in preserving and protecting the environment”—a group that includes Indigenous peoples, activists, and some climate reporters themselves—are “quickly tagged as communists, or people who are very much against ‘order’, against ‘peace’”.

While 11% said they experienced ‘physical violence’, nearly a third of journalists said they had experienced ‘legal threats’ (30%).

Survey data revealed that although the majority (61%) of journalists and their media outlets are ‘never threatened’ because of their work, 39% are ‘sometimes’ or ‘frequently’ threatened. Most journalists said that threats occurred after a story was published (56%), rather than when they were out reporting a story (44%). If they answered that they were ever threatened, journalists were then also asked about the nature of the threats they faced. The top three threats journalists reported experiencing were ‘verbal threats’ (52%), ‘threats from people engaged in illegal activities’ (43%) and ‘online threats and harassment’ (43%). While 11% said they experienced ‘physical violence’, nearly a third of journalists said they had experienced ‘legal threats’ (30%) – which accords with a growing trend toward using the law to attack free speech and muzzle journalists in democracies, just as in political systems that are not free (Zapulla and Simon 2023).

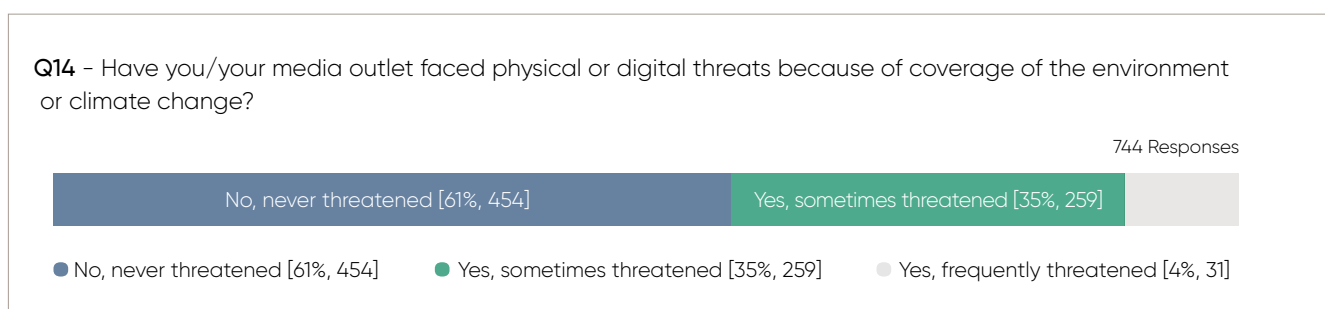


Figure 21: Percentage of journalists who experienced threats against themselves or their media outlets

Q15 - What has been the nature of these threats? (Choose all that apply)

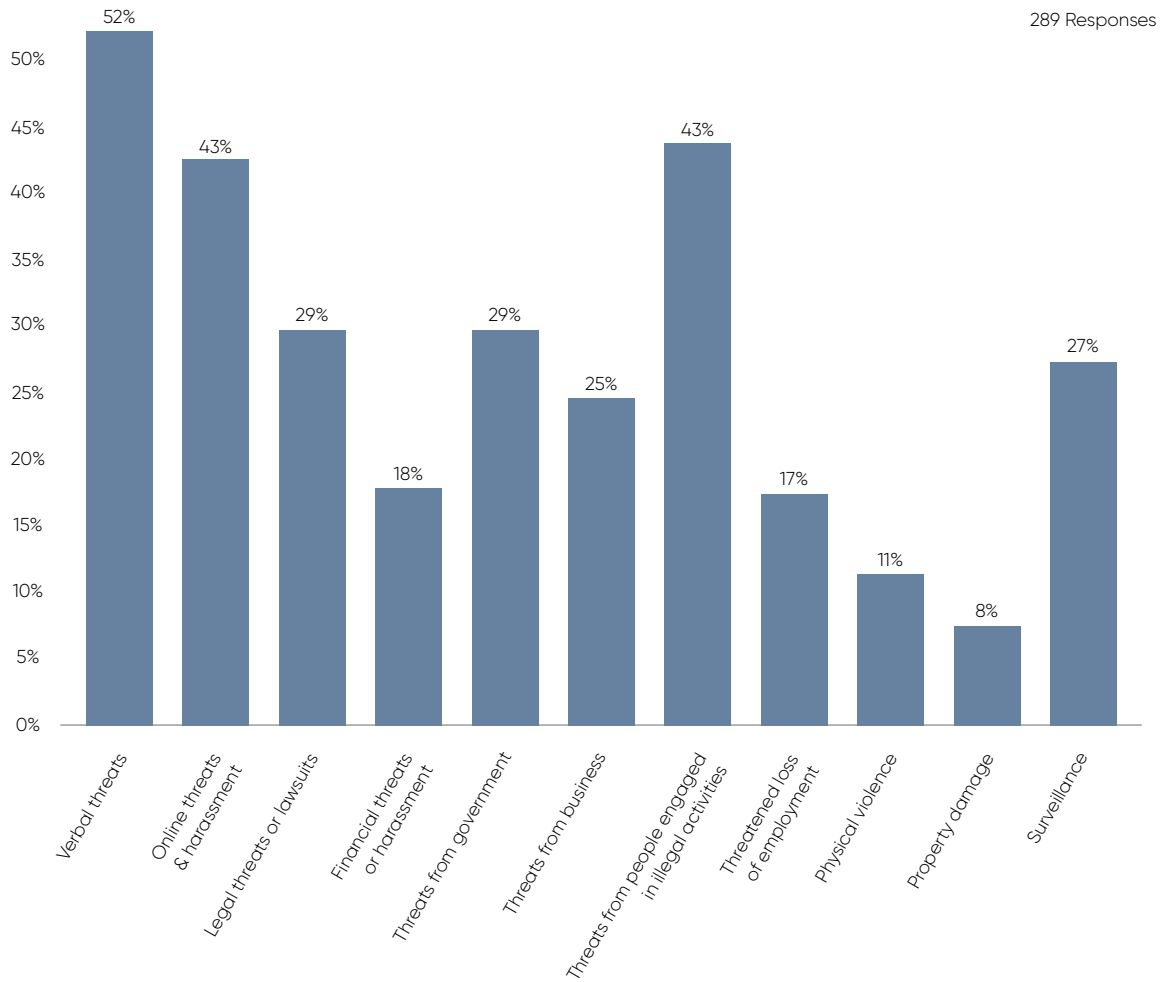


Figure 22: Types of threats journalists reported experiencing

We also wanted to understand if there was any gender dimension to journalists feeling and being threatened. Though there was no clear trend of, for example, women journalists being threatened more than men, we did discover that journalists who identified as non-binary reported being threatened slightly more than other journalists – though numbers were too small to be able to report a significant trend.

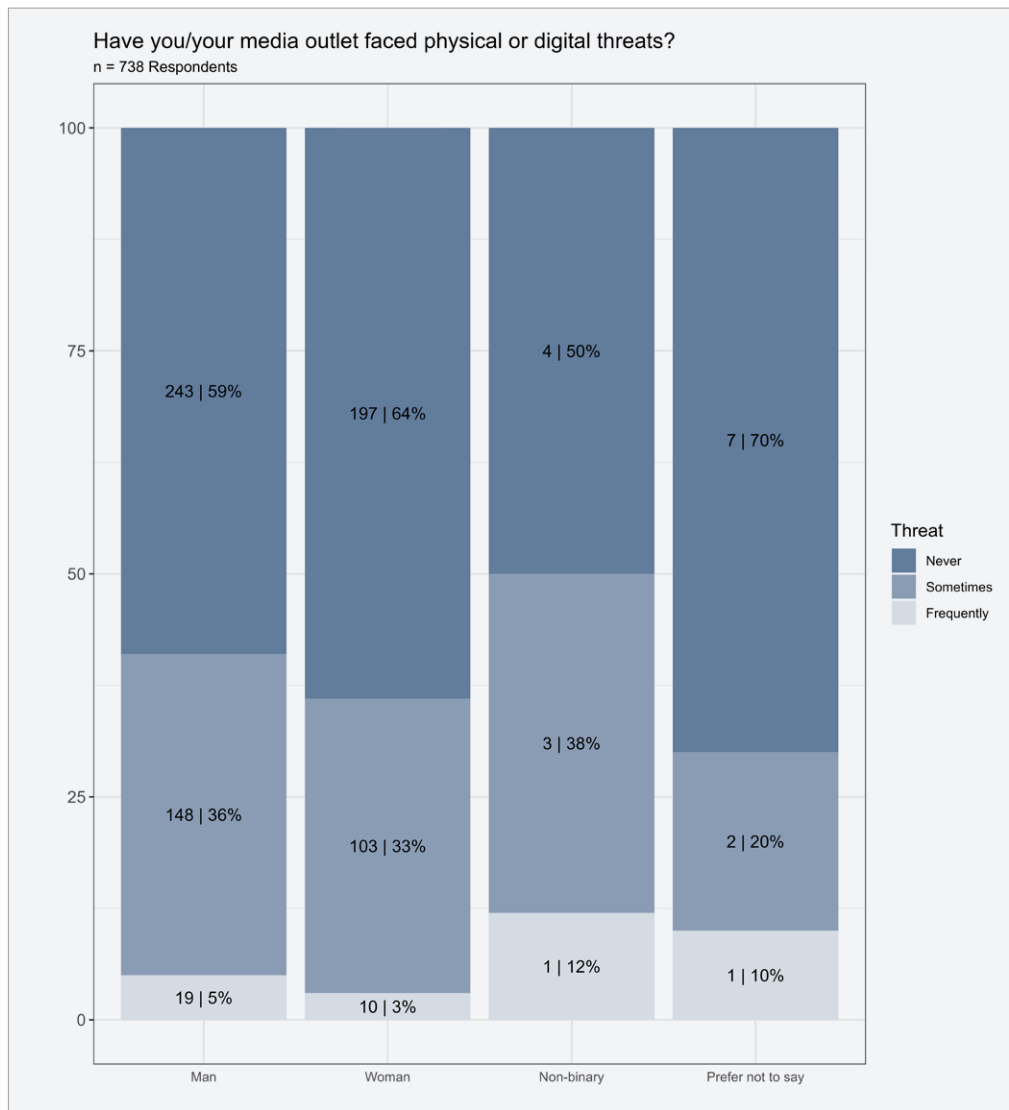


Figure 23: Threats to journalists and/or their media outlets, with a focus on the responding journalist's gender

We know that one of the consequences of journalists being threatened is to self-censor their work so survey respondents were asked whether they had self-censored. 39% of journalists said that they had, while the majority (61%) had not. Journalists who answered in the affirmative reported that 'those undertaking illegal activities' (42%) as well as 'government' (41%) were the top two causes of their feeling the need to self-censor.

Q17 – Now you will be asked some questions about self-censorship. This means choosing not to report on an issue, or changing the reporting approach, out of fear of retribution. Have you ever practised self-censorship in relation to climate/environment stories?



Figure 24: Journalists who said that they had self-censored in reporting climate/environment

Q18 – Who or what has caused you to feel the need to self-censor your climate/environment stories? (Choose as many as apply)

290 Responses

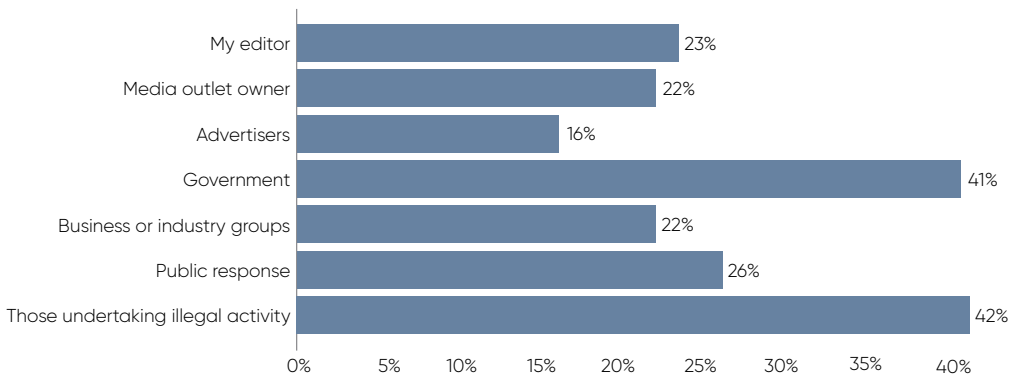


Figure 25: Perceived causes of the need to self-censor

Q19 – Has your need to practice self-censorship increased or decreased over the past decade?



Figure 26: Journalists reporting a change in the need to self-censor, over the last decade

Worryingly 45% of journalists said their need to self-censor had increased over the last decade. This clearly substantiates that a range of threats toward journalists has a chilling effect on media freedom. This is particularly concerning in the context of climate and environmental journalism, when it is so pressing that environmental harms and those responsible for them be revealed.

To better understand the profile of threats in each country, we also undertook some statistical work to

ascertain which were the top 5 threats most prevalent in each location. Figure 27 reveals that 'online threats and harassment' were most widespread in the countries represented, followed by 'verbal threats'. Of interest to the Australian-based research team was that 'legal threats' were perceived as one of the key threats in an Australian context. This is substantiated in a spate of lawsuits against journalists in recent years – though not necessarily in relation to environmental reporting.

'Threats from business' were reported to be more prevalent in national contexts like South Africa, Bangladesh and Vietnam. It is clear, then, that the nature of threats is somewhat specific to the national context – yet journalists in many countries feel threatened doing their work, and not just in those countries usually flagged as the most dangerous for journalists.



Figure 27: Threats by country, representing 33 countries and all 'other countries' combined. Numbers represent percentages of selections within each country

Finally, it is clear that the prevailing media landscape within any national context, including the legal guarantees of media freedom, has an important bearing on how safe – or in danger – journalists are when covering the environment. To further examine the data this study collected on journalists being threatened when covering climate/environment, we correlated threats to journalists by country from the research survey with the World Press Freedom Index for each of the 33 countries with the most respondents. The trend observed here is very clear. The percentage of journalists who were threatened at all (respondents who said they were ‘sometimes’ or ‘frequently’ threatened are taken together here) is much higher in

countries with the lower Press Freedom Indices. In Sri Lanka, for example, where 80% of journalists said they were threatened, the WPFI is a low 35, whereas in Germany, with a high WPFI of 83, no journalists at all reported being threatened. For context, Germany is ranked in 10th place on the World Press Freedom Index for 2024 (RSF 2024). Norway is placed first with a score of 91, and Sri Lanka is ranked 150th out of 180 countries, with the lowest score being 16 (Eritrea). Certainly, then, threats to journalists reporting on climate change and the environment have a real bearing on media freedom, and also conversely, threats are more likely to occur in countries where media freedom is not well established or defended.

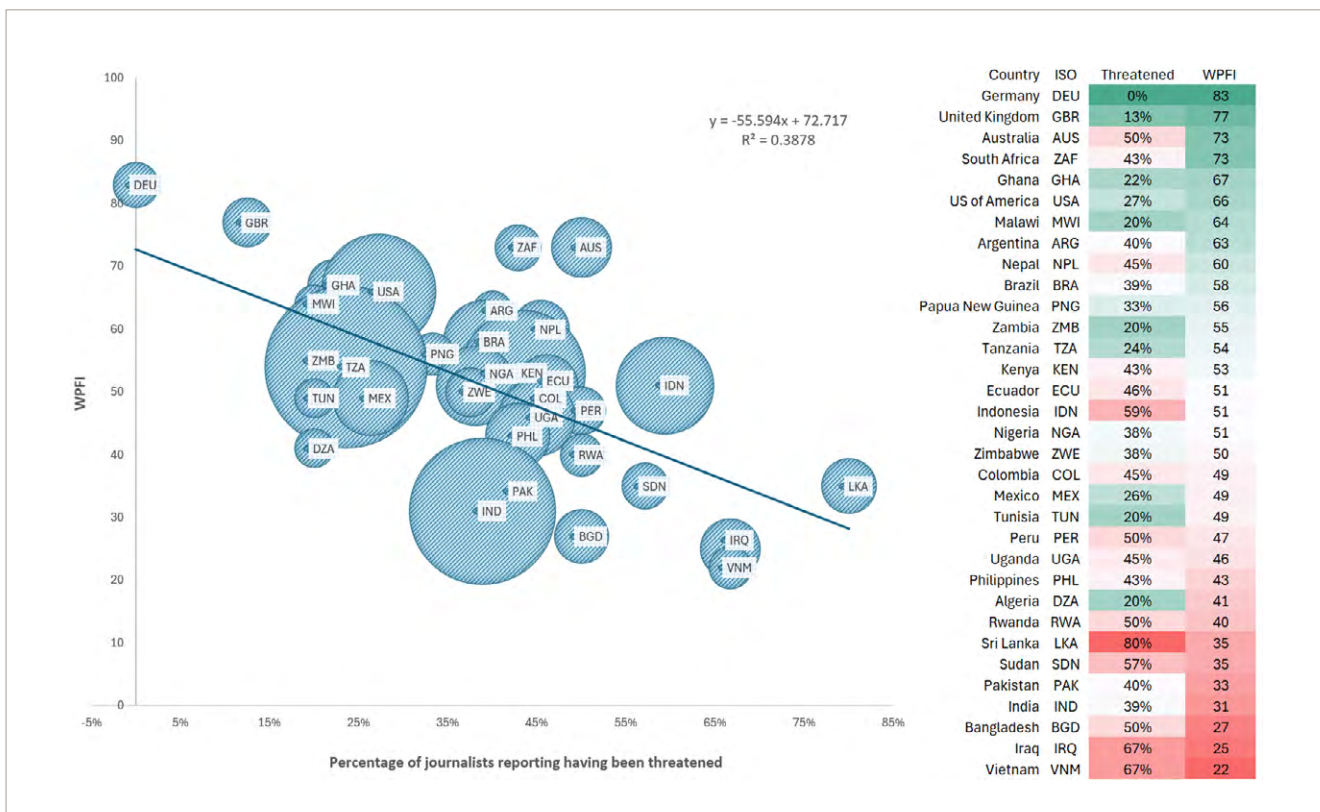


Figure 28: Threats to journalists against the World Press Freedom Index 2024 data for 33 countries

6.8 Misinformation and its impact on reporting



Much, detailed research indicates that misinformation about climate change is both deliberately produced and disseminated and inadvertently spread (Cook 2022; Treen et al. 2020; van der Linden et al. 2017). Misinformation is easily proliferated by individuals in the online sphere – but it is important to remember that there has also been a decades-long, systematic disinformation effort to cast doubt on climate science and solutions (Brulle 2018) led by the fossil fuel industry and other actors intent on maintaining the current status quo, and more recently, delaying climate action (Lamb 2020). Generative artificial intelligence (AI) has also more recently complicated the mis/disinformation landscape. While it can play a role in the dissemination

of falsehoods in media discourse (Broussard et al. 2019), AI also offers tools for detection of fake information (Kertysova 2018). In doing so, AI certainly complicates the information landscape journalists participate in. It is additionally worth considering that the terms mis/disinformation are often conflated or used interchangeably. In this study, we used the term 'misinformation' as an umbrella term to cover both – partly because it is not always clear whether misleading information which spreads via the media is unintentional or deliberate.

In this context, this study was interested in hearing from journalists themselves how misinformation about the causes, impacts and solutions

to climate and environmental harms affects their work, and the information landscape in which their work unfolds. A very large majority – 90% of survey respondents – reported a perception that misinformation undermined their climate change and/or environmental reporting to some extent. Respondents said that misinformation impacted their reporting 'very much' (31%), while only 11% answered their reporting was not affected at all. In this question, we use the term and the concept 'misinformation' to encompass disinformation also: that is information that is intended to mislead, as well as information which may be unintentionally incorrect.

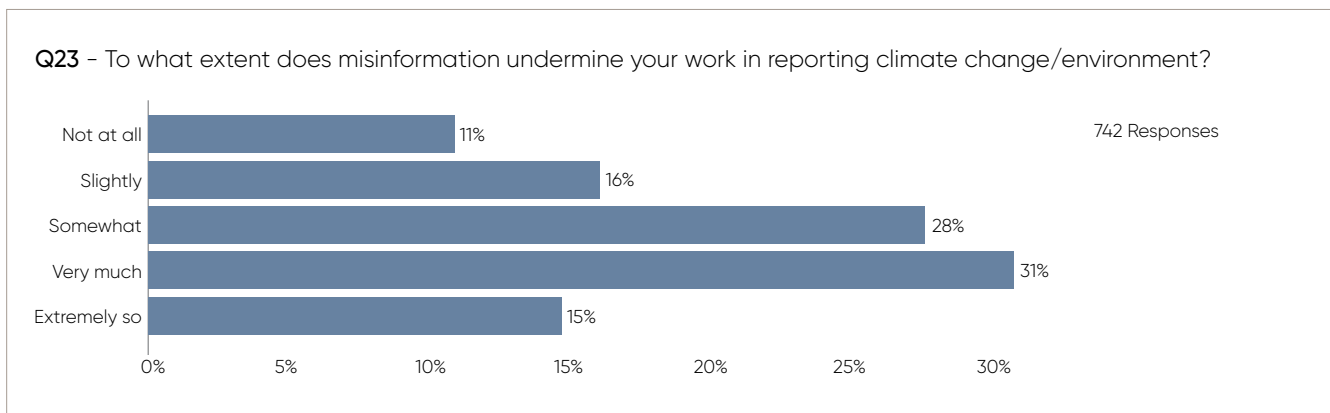


Figure 29: Journalists' perceptions of to what extent misinformation undermines their work

Respondents were then asked whether misinformation had grown in their country's media over the last decade. In response, 58% of those surveyed affirmed that misinformation had indeed increased, while 27% of respondents reported misinformation had decreased in their country. This latter figure may be partially due to a lack of awareness of misinformation, given that it is becoming so pervasive and widespread.

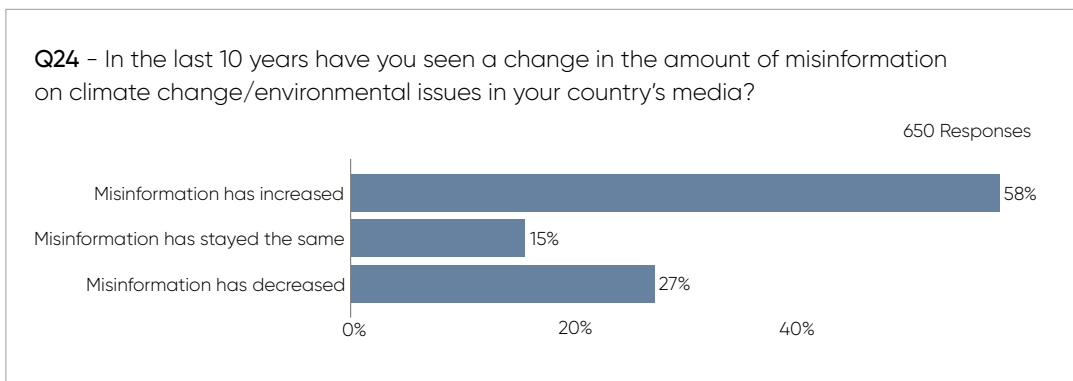


Figure 30: Amount of misinformation on climate/environment journalists perceive in their country

In a similar vein, interviewees were almost unanimous that misinformation erodes public understanding of climate change and the environmental issues they report. However, opinions differed between interviewees on the extent that misinformation impacted reporting. For example, one journalist from New Zealand believed misinformation was “one of the greatest barriers” to climate and environmental reporting and explained that this led to animosity toward those reporting on climate change. This journalist explained:

“...it is impossible to be a climate reporter in this country without facing a significant amount of hostility.” (Journalist, New Zealand).

Another journalist from Canada concurred, stating:

“It makes the job harder for sure, because it’s confusion. And for people who are not inside the bubble, who aren’t following the issue every day, it makes it that much harder to sort out what’s actually going on when you’re constantly trying to balance reality against manufactured, misleading, crap.” (Journalist, Canada).

On the other hand, some interviewees believed that while misinformation existed it did not have a great impact on public understanding of climate change and environmental issues:

“I don’t think it’s as big an issue here as in other countries. I think generally, there’s consensus on science here. And I’m sure there are pockets of climate skepticism, but they’re pretty small.” (Journalist, Australia).

“So, I think in terms of misinformation, there is some misinformation going on, but I think the public is getting smarter, they can actually differentiate between what information is actually misinformation and what information is actually accurate.” (Journalist, Indonesia).

“Definitely disinformation is a plague in the Philippines, but whether it has affected understanding and knowledge in issues related to climate and environment, I am unsure.” (Journalist, Philippines).

There was a view among some interview participants that misinformation had little impact on public understanding of environment and climate change because their public’s knowledge of such issues was already very limited.

“And I believe misinformation does exist, but one of the issues that I see is lack of information, not misinformation, but lack of information. Most of the people in the rural area they don’t know climate change.” (Journalist, Solomon Islands).

“But I mean, the misinformation is kind of directly associated with [the amount] of information you have, right? When you don’t have much information, I mean, there’s no interest to create misinformation around that.” (Journalist, Mongolia).

It is worth reiterating the distinction between misinformation and intentional disinformation here. Journalists may not perceive erroneous information to be ‘misinformation’ if they are not fully aware of the definition of the term.

Incomplete or inaccurate information, disseminated by a person unaware of its inaccuracy, can be misinformation. As such, misinformation may sometimes be as problematic as disinformation, which is intentionally misleading. Furthermore, misinformation thrives in a vacuum – or where there is little accurate information to counter it. So it is not necessarily true that there is less misinformation about climate change in places where less climate change information circulates.

On the other hand, a few of the journalists interviewed in this study said they believed misinformation was not prevalent in their country due to people’s connection to the environment and with their communities:

“Sometimes you see inconsistencies, and sometimes people just don’t care, but they do believe that in Costa Rica in general we care about nature. So, because we think [like] this, I don’t see fake news here in this country, because everybody is aware of climate change.” (Journalist, Costa Rica).

“...if I’m being honest, misinformation in terms of climate-related impacts here in Fiji, there’s not a lot. In fact, I can’t even pick out any... I think because we’re very in tune with our people and we have a very close relationship with people in villages, in urban and rural. So, if we’re here in the urban areas, we are still connected to those people out in the villages, you know, so there’s no disconnect there.” (Journalist, Fiji).

Notably, several interviewees expressed the sentiment that misinformation in their country is “not as bad as in



the U.S.". A few of these interviewees identified Donald Trump as a source of climate denialism in the U.S., and expressed they did not have an equivalent in their countries. Examples include the following:

Not as bad as in the U.S. I mean, I know how bad it is in the U.S. I don't know in Australia, but in the U.S. it's really bad. (Editor, Indonesia).

"I will say not the way it happens in the U.S... We don't have a Donald Trump in India." (Journalist, India).

"For example, we don't have an official denier of the climate change. We don't have a Trump saying there is no climate change." (Journalist, Mexico).

"There is a lot of climate disinformation. There is not as much as in the U.S., but there is a lot of climate disinformation." (Journalist, Brazil).

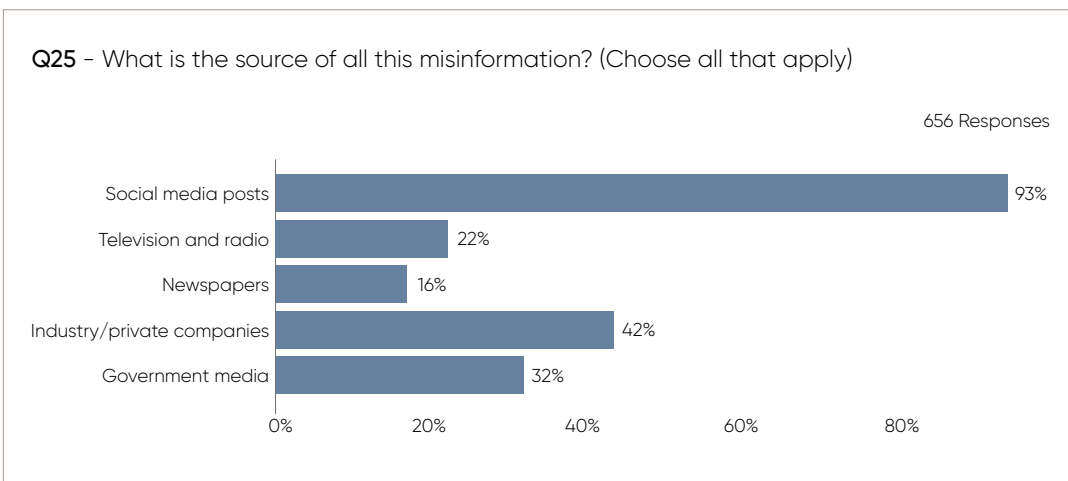


Figure 31: Journalists' perceptions of the sources of misinformation in their country

Coinciding with the survey findings, interviewees also reported social media as the main source of misinformation about climate change and the environment, followed by governments. Interviewees speculated on why misinformation spreads on social media, suggesting that limited public understanding may contribute:

“You’ve never heard about it [climate change], you don’t know whether it’s true or not, and if somebody comes to you, you know, probably through WhatsApp, because most Indonesians are on WhatsApp, you read something on WhatsApp, with a flyer or a poster, or whatever is easy and appealing to see and understand. And when it contains misinformation with regards to climate or environment, you know, you tend to buy the narrative just directly, right away.” (Journalist, Indonesia).

“You get these, you know, really wild and simplistic things in a range of directions... that really can take hold, and often reach people who aren’t really engaging with, you know, mainstream media in an in-depth way on a daily basis.” (Journalist, Australia).

One journalist from Brazil commented on the combined effect of low public understanding and government-produced and propagated disinformation:

“Our population has very low literacy levels—people are not used to reading that much and our population relies too much on what they see on social media, especially on WhatsApp. And for years now, we have had a very well-organized

disinformation machine, into which extreme right politicians and other interest groups pour a lot of money, and they make disinformation about just everything...” (Journalist, Brazil).

They went on to note that because public understanding of climate change and environmental issues is so low that audiences become “infected” with misinformation:

“It’s really hard to debunk those kinds of beliefs. And for us as journalists, it’s an inglorious battle, because disinformation through WhatsApp gets to people much faster. It talks to people’s stomachs—people don’t have to really process that information intellectually.” (Journalist, Brazil).

A few other journalists echoed this sentiment, expressing the difficulty they faced keeping up with the inundation of mis/disinformation on social media:

“Okay, I want to go back a little bit about how the massive information on social media in Indonesia by X, or YouTube, TikTok, you know, it’s like a flooding of information, many [kinds of] information, that people can choose what they want to believe in.” (Journalist, Indonesia).

“In the time it takes me to produce a story, you could probably produce 300 misinformed articles.” (Journalist, Cambodia).

During interviews, journalists often identified that the nature of climate change mis/disinformation has shifted over time, moving away from climate

denialism toward ‘delay’ and promotion of ‘false solutions’. Interviewees suggested that these forms of mis/disinformation are commonly perpetuated by governments and high-emitting industries in their countries:

“We call some programs of climate crisis mitigation a ‘false solutions’. For example, the carbon trading, you know.” (Journalist, Indonesia).

“It’s usually just that now they’re sort of more likely to propose solutions that don’t move fast enough. So that’s a different type of problem. I think [climate scientist] Michael Mann calls that like “delayism” instead of denialism. Delayism is the new denialism.” (Journalist, U.S.).

“And also, maybe, false terms. One example is EBT [Indonesian: Energi Baru Terbarukan], renewable and new energy. Government always use that kind of term to say renewable energy... But, if we say EBT...that means also nuclear and coal, liquid coal... The government also always uses that term EBT term for ET [Indonesian: Energi Terbarukan], for renewable energy. So, many Indonesians say EBT, including journalists and NGOs.” (Journalist, Indonesia).

“So, many of the same companies, they went from challenging the climate science to now creating false responses to the climate crisis. And that’s where a lot of the misinformation, I think, is now.” (Journalist, U.S.).

On the other hand, we heard from journalists that misinformation could also stem from audiences' lack of knowledge. In Mongolia, for example, a former journalist who now works at a media support NGO stated that journalists covering climate change in that country have to contend with local beliefs, which play a role in obfuscating the reality of climate change:

“People associate climate change with...unseen forces, like gods. They do these rituals to ask to make the situation better. If there was a flood or whatever, a drought, then they ask for nature to change that, without necessarily knowing that them using motorcycles rather than horses to herd their animals is affecting that.”

Reporting on this issue is made more difficult, this interviewee claimed, as among those Mongolians who accept that climate change is real, it is not always necessarily regarded as a bad thing:

“...there is a long-living set of misunderstandings that can sometimes come in the form of misinformation that it is good for Mongolia that climate is changing. Because we have a very severe

winter, a very difficult climate and because in the last few years, the climate change is making winters more bearable, like easier.” (Media support NGO staff, Mongolia).

The prevailing level of public knowledge can also help support and enable climate journalism, where this knowledge is robust. For example, a Costa Rican journalist reported that environmentalism is part of the national identity of that country and “everybody is aware of climate change”:

“...here in Costa Rica, we hold very dear the climate change thing, because we, Costa Ricans, we consider ourselves very close to nature....So, because we think this, I don't see, fake news or something...here in this country, because everybody is aware of climate change. And actually, because of our metrics, we know that people are worried about climate change here in Costa Rica.” (Journalist, Costa Rica).

This Costa Rican journalist used the example of recent heavy rains and flooding in the country, where it was not uncommon for news outlets to link the increasing severity of these natural disasters to climate change and

receive little push-back: “we said, ‘look, this is not only heavy rains, this is linked to climate change’. Nobody denied that”.

Misinformation about climate can also be more subtle, for example, *failing* to attribute extreme events to climate change in the media, so that people come to accept them as a ‘normal’ part of local climate. For example, one Filipino journalist explained how coverage of extreme weather events such as typhoons was an “entry point to climate reporting” in the Philippines. However, the high frequency of these events means that for many locals “they’ve thought that it’s already part of the system that they have to go through year after year”. Failing to clearly attribute and report the influence of climate change on extreme events, then, contributes toward audiences accepting such events as a normal part of local weather. Such incomplete coverage of climate change is particularly problematic in places like the Philippines, where climate impacts are already so stark.



6.9 Still ‘balancing’ with climate skepticism?

Research into media coverage of climate change, specifically, indicates that in many countries, climate coverage is improving over time, with journalists tending to report in a way that is more reflective of scientific consensus on the issue (Brüggemann and Engesser 2017). Climate journalism researchers now broadly regard ‘balance as bias’ (Boykoff and Boykoff 2004) as a tendency of the past.

However, the current study found that the global climate reporting landscape is far from uniform in this regard.

In the research, journalists were asked: ‘In your climate reporting, do you provide “balance” by including statements from sources who are skeptical of anthropogenic climate change or climate science?’. Of 733 responses to this question, 454

(62%) respondents answered in the affirmative while 279 (38%) answered negatively. Figure 32 illustrates how journalists in 33 countries (plus all ‘other countries’) answered in response to this question.

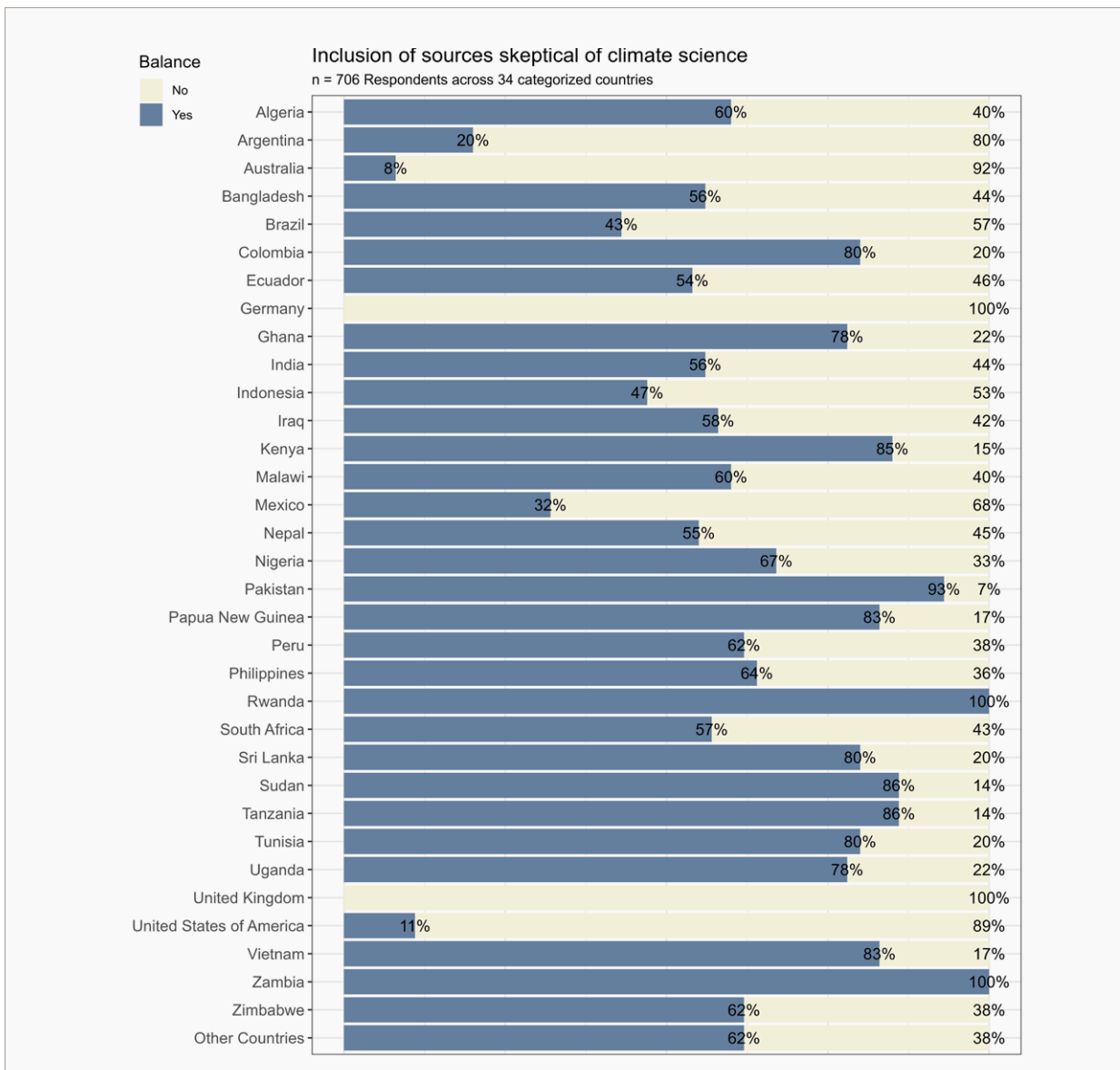


Figure 32: Percentage of journalists, by country, that include ‘climate skeptic’ sources in their reporting to provide ‘balance’

That journalists in so many countries – and a clear majority across the whole cohort of survey respondents – persist in including sources with ‘climate skeptic’ views in their reporting is surprising and disturbing. Figure 32 suggests that there are some regional characteristics to journalists’ inclusion of climate skeptical views. Notably, journalists in Argentina, Germany, the United Kingdom and the USA were less likely to include climate skeptic sources in the name of balance, while journalists in Zambia, Rwanda and Pakistan were most likely to do so. There appears to be more inclination among journalists in African countries, generally, to include climate skepticism as a means of ‘balance’ in their climate coverage. Lidubwi and Wamwea indeed noted this in their recent (2023) study of climate misinformation in East Africa.

The fact that 62% of the overall survey cohort reported providing a platform for climate skepticism may be somewhat confounded by the fact that more journalists from African countries responded to our survey than journalists from other nations – and this is perhaps a limitation of the study. We did not ask journalists in interviews about climate skepticism specifically, and this notion was only brought up once in all of the 74 interviews (see section 6.8 above). These results nevertheless suggest that the journalistic norm of balance is still complicating climate change reporting in many national contexts. This is problematic given we know most people get their climate change information from media. Audiences in many of the countries that appear in Figure 32 may believe that the

science on climate change is still being debated – and that its anthropogenic causes are not clearly established. This is highly disadvantageous when widespread public understanding of the causes and impacts of climate change is so urgently needed to support climate action on a global scale. It suggests that journalists in a wide spectrum of countries still have a long way to go toward accurately representing climate change to their audiences. This result also suggests that journalists in many countries need to build their own knowledge about climate change and scientific consensus. This could be done through training on the science of climate change, and responding to climate change – one of the most essential recommendations we make in this report.



6.10 Trust in climate change and environmental journalism

Trust in media has been an important area for media research for decades – one which has arguably become more crucial since peer-produced media has complicated the traditional media landscape. Truth and trust are essential to media’s commercial viability. They also crucially underpin civil society and citizens’ trust in institutions. Trust in media is both widely varying across media markets, globally, and has fallen slightly in the last decade. Audiences’ trust in media is often shown to be reducing due to audience perceptions about the rise of ‘fake news’ and, linked to this, their doubts about media sources’ good intentions (Ipsos 2019). A 2017 Reuters Institute study which investigated audience perspectives on the decline of trust in media showed that audiences (in the U.S. and the UK) view media outlets as “taking sides”

and entrenching polarization. Media are also criticized by audiences for not acting enough to protect truth – by clearly calling out lies. Additionally, and of interest particularly in the context of climate change and environmental reporting, media are critiqued by audiences for creating false equivalence between partisan opinions – precisely the ‘balance as bias’ tendency discussed in the previous section (Newman and Fletcher 2017).

In this study, we wanted to establish whether audiences trusted journalists’ reporting on climate change and environmental issues. Understanding more about audience trust is crucial in the context of climate change in particular, as this has become such a polarized – and polarizing – issue. Given this is not a study that engaged

with audiences directly, the results shown here represent journalists’ *perception* of audience trust.

Most survey respondents reported a perception that their audiences do have trust in climate change and environmental reporting, with 40% believing audiences ‘very much’ trust media and 11% believing that audiences trust their climate and environmental reporting ‘extremely’. A majority of 51%, then, believe that audiences trust their reporting.

Journalists felt 10% of audiences only trusted media reporting ‘slightly’, or ‘not at all’. The small percentage (1%) of respondents who reported perceiving their audiences had no trust in climate change and environmental reporting is encouraging: however, these figures come with the caveat, again, that



they represent journalists' perceptions, and actual distrust may be higher. The 'middle ground' of 38% of journalists who think audiences only trust their reporting 'somewhat' is, however, concerning. If journalists' perceptions about audience trust are correct, it is with this large group of the 'somewhat' trusting that trust needs to be bolstered.

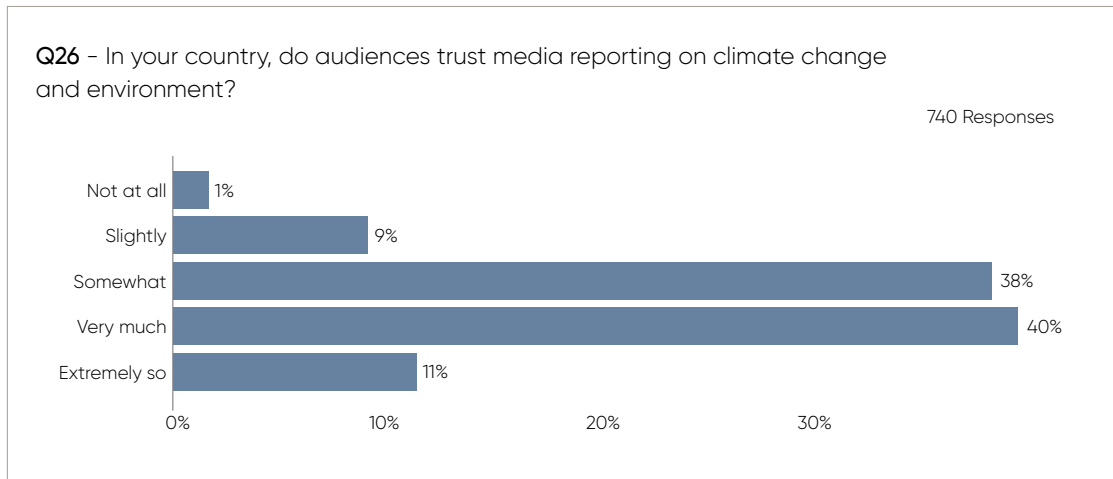


Figure 33: Journalists' perceptions of audience trust in climate change and environmental reporting

While not explicitly asked about audience trust in climate change and environmental reporting – given the survey asked specifically about audience trust – a few interviewees commented on the issue of trust. One journalist from Fiji stated that they believed the proliferation of misinformation on social media had eroded the public's trust in media:

“Gone are the days when we would listen to and believe journalists who write this [environmental stories]. ‘Oh, I better believe this. Because this is a very credible and newsprint organization’, that's no longer the case in Fiji, sadly.” (Journalist, Fiji).

A journalist from the United States expressed a similar sentiment, believing overall trust in media had fallen due to misinformation. However this journalist was hopeful it could be restored:

“I think it's really making sure that you put out good stories that are fact-based, evidence-based, and it's not going to be overnight that you rebuild this trust, but I think over a long period of time, you can rebuild it.” (Journalist, U.S.).

The notion of audiences having trust in media, and journalists maintaining, or “rebuilding” trust using evidence-based reporting is crucial given that trust in journalists themselves is generally low, globally. A 2023 study of public

trust in 18 different professional groups – including politicians, doctors and scientists – in the minds of people across 31 countries (Ipsos 2023) found that journalists ranked close to the bottom (garnering trust from only 25% of respondents, whereas the most trusted profession, doctors, were trusted by 58%). Responding to climate change and environmental harms will require broad public consensus for transformational changes – so it is vital that the forum where most people acquire their knowledge on climate and environment, and journalism as the profession that mediates that knowledge, is one that has the trust of its audience.

6.11 Objectivity versus advocacy

This report has noted how the research literature has traced a strand of advocacy in environmental journalism. Likewise, we have pointed out that some recent scholarship in journalism has argued for the need to move away from ‘business as usual’ journalistic norms in the context of the climate and environmental crisis, given the urgency of taking action on global environmental harms. With access to an international cohort of journalists, this study aimed to establish how currently practicing journalists, globally, regard objectivity, impartiality and advocacy in climate and environmental journalism.

The results of this line of enquiry in the present study were relatively clear and seem to contradict some of the recent research literature – especially the concept of ‘transformative journalism’ formulated by Brüggemann et al. (2022). Although some journalists we interviewed did agree with “taking a

position” (as one Brazilian journalist put it), only about a quarter of journalists (some 18 out of 74, or 24%) interviewed in this study, said they felt comfortable ‘advocating’ for particular policy measures, behavior changes, or any specified responses to current climate and environmental crises. Most cited ‘objectivity’ and ‘impartiality’ as their guiding professional lodestars, and strenuously denied that they would ever ‘advocate’ in covering climate and environment.

However, the interviews for this study did uncover differing, and nuanced, interpretations of exactly what constitutes advocacy, objectivity, and impartiality in reporting on climate change and the environment. Here, we depict a spectrum of journalists’ views on what ‘objectivity’ and ‘advocacy’ mean in contemporary environmental reporting. For example, one UK journalist explained their interpretation as being quite clearcut:

“When it comes to climate change, there’s an overwhelming consensus on the basic facts of climate science and, as such, in our journalism, we’re not going to be including, marginal, niche views of climate denial, because those are contradicted by the evidence. But we’re not going to be advocating or calling for action. So those aren’t my principles. Those are the [media outlet redacted]’s principles. As a [media outlet redacted] journalist I respect and abide by those principles...I don’t see my role as the role of a campaigner. I’m not here to campaign for climate action. I’m not here to tell people what to do about climate change. I’m here to help them navigate the sea of information around climate change. That is my role.” (Journalist, United Kingdom).



A journalist from Fiji explained their thinking on 'objectivity' as an aspect of "maintaining high standards" in journalism. They explained:

"As a journalist, we should maintain our objectivity regardless, but it can be difficult, especially if you're from these communities. For me as a Fijian when I report on these issues, it's hard for me to remain objective because I'm talking about my aunt, I'm talking about my uncle, I'm talking about my family home, even if it's from another village, we're all related. So, having said that, I still believe that a journalist should maintain their objectivity. Because we're not advocates, we're reporters, we're journalists, we should maintain the integrity of our profession, even though we know that this is wrong, but it's not our place to be the judge of that. And I still think that we should still remain objective and let the audience decide what they feel about that particular issue, about that particular policy, about that particular project. But it's not our place to be advocates." (Journalist, Fiji).

However, another journalist, from Mexico, commented that the concept of objectivity itself was something they felt was a 'Western' construct, that was not well aligned with the way journalism is being done across the globe. This journalist commented:

"I wonder why there is this obsession with objectivity? It think 'objectivity' itself is a Western idea that does not always serve journalists well. It has been imported into our journalism training here too. But why? In

Mexico, telling environmental stories can mean being more subjective – telling people's stories, untangling problems where we can." (Journalist, Mexico).

Other journalists considered that aligning with science and underscoring positions that would hold decision-makers to account might also be interpreted as advocacy – though they did not believe it to be such. A specialist climate change reporter from Australia, and an Ecuadorian generalist journalist, and a journalist from Indonesia explained their position on objectivity, advocacy and neutrality as follows:

"I hate the word objectivity as it relates to journalism. I just think it's a bit of a furphy.⁶ ...Advocacy is about talking about the science and the best policies that go with the science. You know, you don't have to be a radical or an activist to advocate. And so, for me, the science is very clear. We should be holding governments and businesses to account to ensure that we stick to global agreements on climate change. So, I think that could be interpreted as advocacy by some people. But holding people to account on one and a half degrees, and science, and policies to get us there: I think it's pretty clear cut." (Journalist, Australia).

"I don't think advocating for the climate, it's an activist thing. I think it's an obvious thing. It's the same as human rights or gender rights. So, it's not an issue for me. I just feel it's something I can do freely because [it's] something I believe, because it's true. It's not an opinion." (Journalist, Ecuador).

"We cannot be neutral anymore if you're talking about the climate, because the issue is quite hard and there's also the science. And climate is about the justice, and if we're talking about the justice, we cannot be neutral anymore." (Journalist, Indonesia).

This study also observed a trend that has been cited in the research literature: that embeddedness in community demands journalists' engagement with what would be best for that community (Hess and Waller 2017). When journalists report for local communities about local environmental concerns, advocacy therefore seems more natural:

"The stories that we write, especially for the communities we work in, our communities, we kind of grow and live with these stories, grow with these stories. And we look at ourselves as part of their stories. And we think there's a community out there we are fighting for. So then, even before writing stories, we look at the significance, why we are going to write this. If it's around, you know, biodiversity, for example, stories about, you know, climate change, environment. And we're out there as advocates for something because we think there's something [we] want to happen. So, we go out there and contribute to us having that goal of having something happen. So, then I think, yeah, I think we advocate, we are advocates for something when it comes to reporting on, for example, on climate change and environment, because for most journalists that are in this beat... they want to fight for something." (Journalist, Uganda).

⁶ "Furphy" is an Australian slang word for a concocted or improbable story that is claimed to be factual.



Other journalists regarded one of their professional obligations as being a “voice” and speaking out on behalf of those whose voices are not listened to. This includes either human groups who tend to be marginalized and whose voices are seldom heard in media coverage of environmental debates, or indeed, nature itself. If this was regarded as advocacy, then these journalists were comfortable taking on this role:

“So, I would not say we should not be advocating the issues. We should be advocating for issues. Like for example, I am writing on Indigenous issues, and I have to advocate for people who are suffering. In that way, it’s advocacy itself. But keeping that in mind, I think it’s very important to be objective as well. Because when you’re not objective, it’s impacting the outcome and quality of your work. So, in that sense, I think there should be a fine line in between. Because it’s not possible that you don’t advocate for the people you’re writing for. You should do it.” (Journalist, Nepal).

“I do believe advocacy is a part of our work. Why? Simply, when I write an article about political

issues or economic issues, there are two parts. And both, they can express themselves. And they can, you know, show their opinion, their policies. But when you talk about climate issues, there’s a part – society, human society can express itself – but the nature cannot. The species cannot. So, in this case, how to be objective to keep the balance between species and between humans?” (Journalist, Iraq).

Finally, journalists also cited solutions or constructive journalism in the context of discussion about advocacy. One journalist from Mongolia saw this as closely aligned with advocacy, which they regarded as one further step along the objectivity-advocacy spectrum.

“But when it comes to, and right now in Mongolia, also, we are in a very big argument within our industry, on whether journalism has an advocacy kind of role. My argument is, if we were in Norway, we probably don’t have to. But because there are lingering issues that are not being solved for 30 plus years, and people are dying because of that – when there is no war – I think we should

have a higher advocacy role. But there are ways to do solutions journalism without, like, actively advocating, but still constructively talking about it and promoting discussions. Right now, what I’m publicly saying is, we’ll do solutions journalism in a way that’s not advocacy, or activism. But in the back of my mind, I do think journalism should have that role, step up and should have that role.” (Journalist, Mongolia).

From detailed conversations with journalists, this study starts to build a more nuanced picture of the fine dividing line that separates traditional journalistic norms from the ways journalism is being practiced on the ground, all over the world, today. Though many journalists, and perhaps also some funders of such journalism, may reject the idea of advocacy in climate and environmental journalism, it appears that many are indeed enacting a more subjective role conception, championing the needs of communities and those that are suffering at the ‘front lines’ of climate change and environmental harms.

6.12 Having impact and making change

The impact of journalism can be hard to substantiate as change is often brought about through a confluence of factors. Detailed research into the impact of journalism is rare, and although such research has shown that journalism can have demonstrable impacts (Tolmie 2023) such highly detailed work is not common, meaning that links between the work of journalists and real-world impact are not often clearly made. Such impact-tracing was beyond the scope of this study, however, we did want to know journalists' own perceptions on whether their work had achieved impact. One interview participant who had reported in both Poland and the Netherlands stated:

“I think it’s a really difficult question to establish a very clear causation with most stories, unless they’re so explosive that they actually lead to a scandal, which rarely happens.”
(Journalist, Netherlands).

A U.S. editor interviewee similarly noted that often the impact of environmental journalism is through an indirect “contribution”. Interviewees in the U.S., Brazil, New Zealand, and Australia – countries with relatively recent changes at the political level from more conservative to more progressive national governments, or vice versa – also observed that it was difficult to determine whether changes to government policy were the result of journalists reporting on climate change and the environment, or whether parties were changing policy in response to perceived public pressure.

Despite these complications, making change or having impact through one's work remains an important motivator and measure of success for journalists (Tofel 2013, p.3,9) – particularly those practitioners whose reportage

involves exposing wrongdoing or identifying societal problems. As one U.S. interviewee put it: “I think that most people who get into journalism do want to make an impact with their work”. Bringing about such change through journalism, however, often requires the engagement and mobilization of the public, and the willingness of those in positions of power to be swayed by public pressure. One interviewee from Austria explained the process as follows:

“I think how journalists created the changes that they got is by making the people living in Austria be aware of what’s happening. And so they are demanding something different and in return, the politicians are reacting to them.”
(Journalist, Austria).

An interviewee from Costa Rica outlined this phenomenon in starker terms:

“...you can say that you see these changes, because my outlet and all media, we do pressure a lot of our politicians. And I don’t know about yours, but mine: they want re-election. So, [if] you are pointing out something that is problematic in terms of re-election or popularity or something like that, they tend to act. I don’t know if they do it for conviction, or for pressure, or convenience, but they do.” (Journalist, Costa Rica).

A journalist in Canada, who has a background in investigative reporting, suggested that impact was not necessarily driven by high readership numbers and audience mobilization, but by connecting more directly with policymakers:

“...it wasn’t that a lot of people read them, but that the right people read them. And I think that is the key to a lot of the environmental journalism we see in Canada and what I seek to do. I’m not under any illusions that I’m going to get millions of clicks on my stories. But I do think that if I develop a reputation as a reporter who’s breaking news that matters on a public policy front, when it comes to the environment, when it comes to climate change, that the right people are reading my stories, and that these are decision makers, these are influencers—and I don’t mean TikTok influencers, I mean people who whisper in the ears of those with power, and are actually able to influence - on an individual level - government policy. And so, you know, in a weird way, I don’t let the small numbers or the lack of huge readership discourage me because I do see the impact the journalism has.” (Journalist, Canada).

In this study's survey component, 741 participants responded to the question "Do you think there has been change as a result of your work reporting on climate change and the environment?" Responses were across seven pre-identified fields, which can be grouped

into no change, internal change (in newsrooms), external public change, and external change among the power elite (industry practice and government policy).

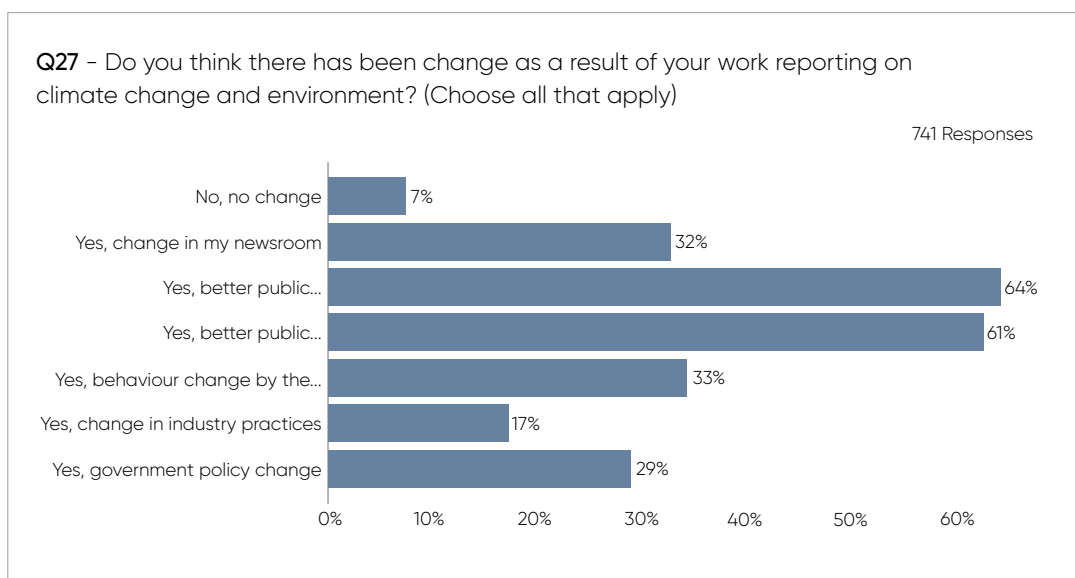


Figure 34: Survey respondents' perception of change as a result of reporting

While the majority of respondents indicated changes at the level of public understanding/awareness of climate change (64%) and of environmental issues (61%), this was not reflected in the respondents' perception of actual behavioral change among the public (33%). This suggests the majority of journalists in this space feel as though their work is raising public awareness/understanding and playing a role in educating audiences about the reality of environmental issues, but those audiences are not necessarily acting on that newfound knowledge or altering their behavior accordingly. Additionally, 7% of respondents indicated they believed their work had brought about no changes.

Journalists involved in this study seemed generally optimistic about the capacity of their work to spur change and influence audiences, but remained realistic about potential limitations. As one interviewee from the Philippines stated:

“Yeah the understanding, awareness etc? I guess we’re creating initial progress. We’re creating initial progress. It’s not drastic changes, but our stories, I believe, are creating an impact. Not only in the Philippines, but all over the world.”
(Journalist, Philippines).

An interviewee from the Solomon Islands similarly stated that “generally, our reporting, although it still has a long way to go, has been, in a way educating our people on the impacts and effects of climate change on their lives”. One U.S. reporter described the work of the media as contributing to a “shifting of the Overton window” (the spectrum of ideas on public policy or social issues considered acceptable by the public at any given time) that normalizes climate change issues and “move[s] the conversation forward” among the public and politic.

Twenty-nine percent of survey respondents believed their work had spurred government policy change, and 17% believed they had influenced changes in industry practices. While this degree of perceived impact/change to the power elite is considerably lower than perceived influence among the general public, the fact that 29% of respondents felt they had changed government policy is a surprisingly strong and encouraging finding. However, one potential reason for this result could be that the study survey options did not specify the level of government where policy change had occurred. The interview component of this study provided further context on this point, with many interviewees indicating that changes at a local or state government equivalent level can often be much more achievable than those at a national level. This appears to be partly due to the direct connections local reporters are able to establish with local stakeholders and policymakers, local reporters' ability to demonstrate the ways in which specific environmental and climate concerns are affecting specific communities, and the outsized influence of media outlets in smaller communities. As one U.S. interviewee put it:

“I think the most impact I had as an environmental journalist was when I was working for a pretty small community newspaper in Colorado, for a community of 20,000 people, where I was really able to hold people accountable.” (Journalist, U.S.).

This preference for smaller-scale reform – or at least recognition by environmental journalists that local impact is more achievable – may also be linked to the requirements sometimes set out by NGOs and other media support bodies. While these entities are discussed in greater detail elsewhere in this report, it is worth acknowledging here that many such organizations prioritize impact as a key measure of successful journalism, and tailor their grant applications to reflect this. As noted by Townend et al. (2016, p.4), for example, a funder such as the Bill and Melinda Gates Foundation “requires that its money be spent on journalism that has some kind of assessable impact”. Such a finding was also revealed in the interview component of this study, with one interviewee from Cambodia stating the following:

“Oh, man. The amount of impact assessments I filled out, you’d better believe...All of these grants care about impact. If anything, all these grants care an equal amount about the impact as the story itself, it seems, from what I can tell...” (Journalist, Cambodia).

If media support organizations are prioritizing tangible impact and making this a condition of their funding, it is possible reporters dependent on these grants may either over-report impact or may lean toward less ambitious stories in order to fulfill this requirement. This issue has been observed previously in the literature by Townend et al. (2016, p.4), who note:

The requirement to show ‘impact’ could have possible consequences for the story proposals journalists offer when seeking a grant: they may be more likely to pitch stories about micro-level problems on which evidence of progress or impact is easier to adduce, rather than addressing long-term issues that may be objectively more important to the public interest.



6.13 How journalists perceive the role of media support NGOs

The international ecosystem of non-government organizations, professional networks, private philanthropic and state-affiliated funders that play a role in supporting environment reporters to do their jobs is evidently crucial in supporting the work of climate and environmental journalists, globally. An overwhelming majority of survey participants recognized the

importance of external actors such as local/national media support NGOs or philanthropic organizations to advancing climate and environmental journalism in their countries, with 80% of respondents describing this support as “extremely” or “very” important. Only a scant 2% of respondents described such funders, donors and support NGOs as “not at all important”.

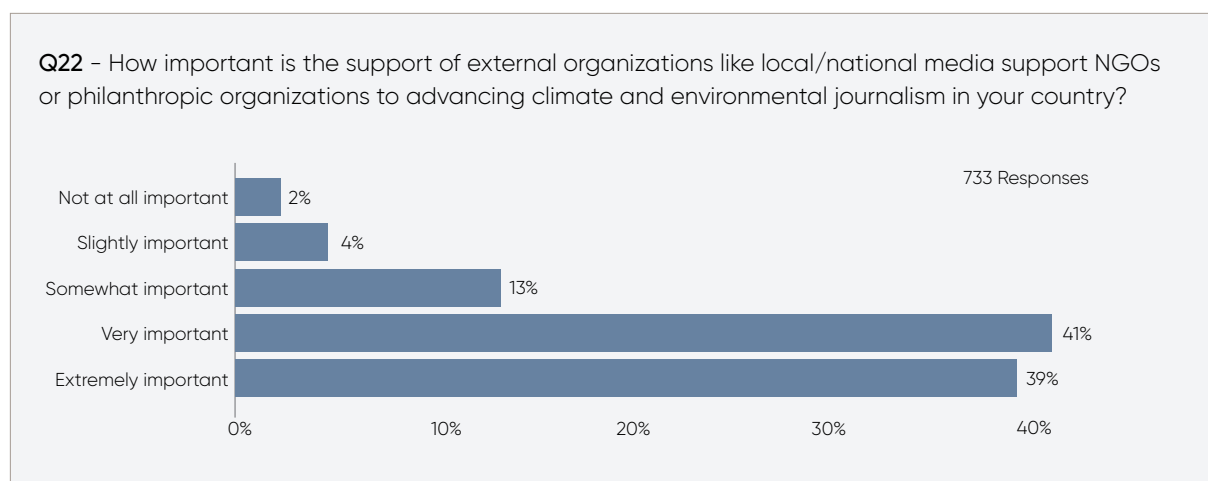


Figure 35: Importance of media support organizations/NGOs

As discussed, NGOs and others in this space provide grants, training, networking/collaboration opportunities, and sources both primary – connecting journalists with experts and spokespeople available for comment on specific issues, as well as secondary sources of information. In many cases this goes toward filling the gap created by dwindling resources and time constraints discussed in detail above.

One journalist-interviewee in Bahrain summarized such support as follows: “they do a tremendous job in helping us with doing things the way they should be done”. Journalists interviewed for this project frequently said that much climate and environmental journalism, in LMICs in particular, might never be produced if not for donor support of the kind described here.

Table 3: Interview responses attesting to the importance of NGO support of climate and environmental journalism.

Reporting Country	Quote
Brazil	"They do everything to make our jobs easier. So, in that sense, I really value the work of these NGOs, because they really help in access to data."
Cambodia	"I think if we took out NGO and foreign funding, foreign government funding, for the independent press, we'd be done. I think that would be the end of it. I think most of these grants are coming from foreign governments and foreign NGOs. So yes, if we removed that, I think the independent press would crumble pretty quickly here."
Fiji	"I think for enthusiastic climate reporters and environmental reporters like myself, these organizations are a lifeline to the stories that we want to bring to life."
Indonesia	"As of now, I think NGOs play a very, very important part in Indonesia to support and boost environmental and climate journalism ... the NGOs, they are very valuable as the go-to resource when it comes to environmental journalism in Indonesia."
Iraq	"NGOs, their support to journalists it has really an impact and positive impact. And a lot of stories, a lot of investigation articles, short films, short documentary films, we produce it, and we're reading, thanks to these organizations."
Philippines	"A lot of these programs have been part of the training of different environmental journalists here in the Philippines. So, it's very important, because it's filling in the education gap when it comes to the environmental beat."
United States	"I do interact with them. I think they're great. I think they do a lot of good work, especially for newbies. I think they're a really great handhold for the first year or two when you're just getting your feet under you."

Despite these positive impacts, journalists noted there was always more that NGOs and other funders could be doing to support them in the environment and climate change reporting space. While some interviewees acknowledged that many NGOs are dealing with the same funding and resource constraints as those within the journalism industry, a repeated theme of these semi-structured conversations was the need for more – more funding grants, more training, more supplementary research, more sources, and more networking opportunities. As a journalist from Ecuador noted:

"Sometimes these small grants are too small, and there is not enough money to cover the story and the travel expenses. That can be improved." (Journalist, Ecuador).

Several contradictions were raised through the research interviews for this study, however, with journalists underscoring the need for more grants, but also stressing their desire for independence and their wish for newsrooms that could eventually sustain themselves without external funding. One Brazilian reporter described her concerns with this over-reliance on grants and funding models she considered to be unsustainable:

"Why did we have so much coverage about Amazon? Because it was important, but also, because there is funding to do that. And I was talking to some friends, that now the deforestation is going down, and things are looking a little bit better, probably, we're not going to have that much money, because this is going to go somewhere else. And this is going to affect the whole ecosystem of independent journalism in Brazil, because there is a lot of new newsrooms that are born because of this funding. Especially international

funding ... Yeah, to me it looks like a bubble. I have a feeling that at some point it's going to crash.” (Journalist, Brazil).

Several interviewees suggested that NGOs could better assist their work through more longer-term reporting roles and through facilitating collaboration between freelancers and established newsrooms. This seems to be consistent with a multi-year funding model, rather than shorter term or one-off funding. One former journalist from Mongolia who now works at a media support NGO suggested a more focused, less ‘scattergun’ approach was required:

“...when there are projects, for instance, funded by international organizations, it's very much scattered. So, it's kind of, in my view, the tactic is that they are scattering the funds into various organizations, just to keep them alive. So, it doesn't give us an opportunity to grow to become an expert in that area. And then we're still like, repeating the wheel again, here and there.” (Journalist, Mongolia).

Another common theme was the need for these organizations to work more closely with newsroom editors and management to enable greater buy-in, rather than relying on a bottom-up approach focusing entirely on frontline reporters. Journalists engaged with in this research thought those NGOs seeking to engage with and provide sources and material for practitioners should also consider meeting journalists where they are, and speaking their language – for example, avoiding technical terms and jargon, and crafting media releases and putting forward potential interviewees with

news values in front of mind, rather than the public relations values of the organization concerned. One reporter expressed his frustration with this current process:

“Sometimes, these NGOs, they do have good data and good projects, they just don't know how to present the information to the media ... if NGOs could somehow harmonize the realities of their organizations regarding communications, and the actual goals they seek with the information they are giving, I guess it would be better.” (Journalist, Costa Rica).

On this topic of collaboration, one Canadian interviewee proposed that NGOs should consider supplementing the work of environmental reporters through what he termed “para-journalism”:

“I used to see it a lot when I was doing financial investigation, that there are these specialized NGOs that specialize in like offshore tax evasion, and corruption, and bribery, and things like that ... essentially, it's just investigative journalism, but it's being done by an NGO. So, I think that NGOs have that role in the environmental space, simply to augment the research powers that might have once been done by journalists, but now wouldn't.” (Journalist, Canada).

Finally, several journalists commented that being required by donors and support organizations to write stories on particular subject areas in climate and environmental journalism as a requirement of funding could obscure some more ‘real’ local stories that urgently needed to be told. Some

journalists suggested that funding should be subject-agnostic, within the broad field of climate and environment. One journalist from Ecuador has this to say:

“Maybe, to be less strict about the topics. Because sometimes it's like, you can only do you know, mitigating climate change in only this specific area of Ecuador. And, you know, the parameters are too specific and it's hard to find stories when you have those limitations. I have found that as an obstacle.” (Journalist, Ecuador).

While there is little doubt that media support organizations, philanthropic foundations, government aid agencies, single-subject news outlets and ENGOs are significantly aiding journalists to report climate and environment stories that would otherwise likely not be heard, there are some caveats about the funder/recipient relationship. The kinds of positive outcomes that journalists report should not absolve the whole landscape of media support initiatives from critical appraisal – especially when the flow of funding is typically one-way: from higher income countries to LMICs. The little research that exists on donor funding of journalism in LMICs has noted the sometimes neo-colonial nature and “inescapably political character” (Miller 2009 p.10) of this kind of assistance. This means that transparency in the relationship between the funder and the recipient of funding is particularly crucial. Journalists need to know whose money has funded them and why. Transparency about funding or particular stories should also be made clear to audiences.

As one of the journalists interviewed for this study noted, for media support

initiatives to be effective in the longer term, reporting jobs needed to be available as well as locally well-regarded outlets in which supported stories can be published. Such stories ultimately needed to be accessible to appropriate local audiences to be able to make locally-relevant impact. As one French interviewee put it:

“...there are some small initiatives popping up in the Global South, but who is really reading them, apart from the donors and the white journalists that speak English, basically? I think that’s a massive, massive problem that needs

**to be addressed in some way.”
(Journalist, France).**

Finally, there is also a perhaps unspoken tension around the fact that high-income country funding is prominent in supporting LMIC country climate/environmental journalism when high-income countries are disproportionately responsible for precipitating many global environmental harms – like climate change – which people in LMICs are now bearing the brunt of. This disjuncture is likely not to be the subject

of climate/environmental journalism funded by international donors, as journalists are possibly unwilling to ‘bite the hand that feeds them’. If this is the case, this is problematic for journalists telling some of the stories that matter most today, many of which are deeply entwined with themes of inequality and environmental justice.



7.

DISCUSSION



We have presented here the results of months of investigations, conversations, and connections between journalists and journalism researchers which have criss-crossed the planet digitally, helping us to synthesize the existing research on climate and environmental journalism with the current reality – and in doing so, to speak to some existing gaps in current knowledge about climate and environmental journalism.

The landscape that has been traced here is one of obstacles and opportunities. We have seen all types of journalists covering climate change: some specialists and many generalists. There is a growing recognition of the notion that ‘every story is a climate story’: that is, there are implications for climate change and environment in many more stories than those that clearly constitute ‘climate’ or ‘environment’ reporting. In the current moment, every journalist needs expertise in these spheres.

Journalists all over the world suffer from job insecurity in the current media landscape. Media outlets in high income countries have lost specialist reporters in recent years and smaller, local news outlets seem to have been hardest hit. Journalists now have scant time and resources to do deep, investigative work. Journalists in LMICs, however, face more challenges than their counterparts in high income countries when it comes to reporting on climate and environment – including greater professional precarity. Many journalists also face real threats to their personal safety while doing their jobs – and they may need to self-censor their climate and environmental reporting as a result. This is not to say that climate change coverage in LMICs is lacking. This study contributes new empirical evidence to the existing work that points out a rich landscape of climate and environmental journalism work in LMICs. This study has found, though, that limited resources for doing climate and environmental journalism are the biggest obstacle to more and better such journalism being produced. Such limitations are also compounded by lack of access to local experts,

availability of locally-relevant data and ways to verify data. Journalists in lower income country settings reported especially a lack of time and money for fieldwork. In some places, especially in rural settings in LMICs, journalists feel challenged by lack of audience understanding of global issues like climate change. In other places, mostly in higher income countries, journalists perceive news avoidance to be a problem for audience engagement with climate and environmental news.

This study is unique and important because it seems to be the first that has incorporated a truly global cohort of journalists in answering questions about the contemporary state of their work ‘covering the planet’.

Conversely, this study has found that more funding, training, access to experts, collaboration and opportunities for mentorships can indeed empower climate and environmental journalists and amplify their work. This study has established that the economic assistance that media support NGOs and other international philanthropic funding bodies provide is fundamental to the thriving of many individual journalists and newsrooms in LMICs. While

training, fellowships, and philanthropic funding are also crucial to supporting the work of covering climate and the environment in higher income country settings, we heard from journalists in this study that much reporting on climate and environment in LMICs would not be produced at all without international funding. However, there is still a tension in the donor/fundee relationship, which requires careful navigation and much transparency in order for donor-funded climate and environmental reporting to be, and to be perceived as, fully independent.

This study is unique and important because it seems to be the first that has incorporated a truly global cohort of journalists in asking and answering questions about the contemporary state of their work ‘covering the planet’. Much previous research on climate and environmental journalism has focused on the U.S., Europe and the ‘Anglosphere’, and although research into climate and environmental journalism in LMICs is increasing, it is rare for such research to focus on both higher and middle- to low-income countries within one study. This global focus has generated rich data, which have revealed some surprising findings. For example, this study has clearly established that the journalistic norm of ‘balance’ is still being widely used in order to justify incorporating climate ‘skeptical’ sources in climate change reporting. Recent studies at the nexus of journalism and climate change had indicated that ‘balance as bias’ (Boykoff and Boykoff 2004) was an artefact of the past, and that journalists are broadly now reporting more in line with scientific consensus. This study underscores that this is not

the case everywhere. This means that in many countries, media audiences are being led to believe that the causes of climate change are not clear, or that necessary responses to climate change have not been agreed on. This is highly problematic when widespread public understanding of the causes and impacts of climate change is so urgently needed to support climate action on a global scale.

In the digital media landscape where anyone with access to the internet can be a producer and broadcaster of information, mis/disinformation are increasingly complicating the job of journalism. We heard from journalists that erroneous information was widespread especially on social media, and that the speed with which it proliferated could 'drown out' carefully researched, factual journalism on climate and environment. Even in these circumstances, and with trust in media declining overall, when it came to trust in reporting on climate change and environmental harms specifically, journalists perceived that media were broadly quite well trusted. This suggests that media – the key source of climate and environmental information for most people – are still the crucial arena for public deliberation on climate change and environmental problems, and what should be done about them. This means that focusing funding and training attention on journalists who cover the planet, so that they can do so better, is important and justified.

This study was also concerned with establishing how in the context of current, cascading environmental harms, and the existential threat of climate change, journalists covering climate and environment saw their professional roles. We confirmed that many journalists felt that 'advocacy' for action on climate and environment was a step outside their long-held professional norms. Journalists we

interviewed, all over the world, did have some nuanced perceptions of exactly what constituted 'advocacy', 'balance' and 'impartiality' – which perhaps go further toward taking an active stance on environmental issues, given the urgency of the situation. However, this study found that journalists, broadly, would not 'advocate' for particular positions, regarding this as contrary to their professional standards. It is clear that journalism has broadened its scope beyond its earlier 'watchdog' and 'Fourth Estate' roles. Some of the most recent research literature on 'post-normal' journalism identifies a new tendency toward journalists taking active positions of advocacy that defend the "most common on common goods" by doing journalism: that is, the ecosystems and natural resources of the planet (Brüggemann et al., 2022, p. 1). However, our global study does not clearly support this previous research observation, with many of our study cohort reluctant to be seen as environmental 'advocates'.

This position demands careful consideration. In other spheres of journalism and on other subject matter, journalists do freely advocate. During the worst times of the COVID-19 pandemic, for example, media in many countries clearly aligned with government positions on vaccine mandates and lockdown orders – often under the unifying phrase 'we are all in this together'. Journalists joined in this advocacy effort, seeing it as 'public interest' or 'constructive' journalism (Sweet et al. 2021). It is worth considering, then, whether journalists should be less hesitant to advocate than this study has found them to be, when covering climate and the environment. NGO funders, too, may need to reconsider their appetite for advocacy in the journalism they support.

Media are crucial in informing and educating their audiences about environmental harms, and media discourse, locally, nationally, and globally, can be a powerful driver of policy making and policy change. As *The Guardian's* global environment editor Jonathan Watts has put it, environmental crisis calls for journalists to "shape public opinion" and "influence change". "Journalism as usual" he notes, is "not enough" (Watts, 2020). As *Covering Climate Now* founders, Mark Hertsgaard and Kyle Pope (2021) have similarly put it, in the face of climate change:

journalists have a responsibility to make sure the public understands what's at stake and . . . to hold powerful interests accountable for doing what's needed to preserve a liveable planet. That starts with telling the truth: about the climate emergency, its solutions, and how little time remains before it's too late.

Such truth-telling must necessarily incorporate reporting on climate and environmental justice. Journalists, especially in LMICs, should make clear to their audiences, countries' differential responsibility for causing climate and environmental crises. From this must follow media conversations about where greater responsibility for climate action – including climate reparation – lies.

'Covering the Planet' in a time of environmental crisis is a privilege and a responsibility. This is crucial and urgent work – and there is much work to be done. This study illustrates a landscape in which many, committed professional journalists are striving to tell the stories that matter most, right across the planet. But they are trying to do much, with little. Supporting and amplifying their work in this global moment is essential if we are to enact the transformative change that is so urgently needed.

8.

RECOMMENDATIONS



Recommendations for funding organizations

- **Funders should make more support available for journalists covering climate change and the environment:**

Media support organizations could prioritize supporting journalism on these subject areas given the urgent nature of climate change and environmental issues. More coverage of climate change and environment are crucial to amplify the salience of these issues for audiences. Misinformation also thrives where accurate information is insufficient.
- **Funders should work with journalists and newsrooms for a focused approach and longevity of funding:**

NGOs need to assist news outlets and individual journalists in the longer term to build capacity and work toward sustainability. Multi-year funding initiatives can build capacity better than more widespread, but short term approaches.
- **Funders should consider journalists' diverse training needs in different country contexts:**

Training needs vary from subject-specific information (especially attribution science, how to access data, how to identify and distinguish between mis/disinformation, and climate justice perspectives), to education on professional norms (use of balance), to in-person workshops to enable networking and collaboration. Training is needed in both high income countries and LMICs
- **Funders should enable journalists to cover the stories they deem most locally relevant:**

NGOs may fund journalists to cover stories in a particular subject area, determined by funder interests and goals – however, making funding unconditional may assist in giving the most crucial local stories priority.
- **Funders may need to develop a more nuanced approach to 'objectivity' and 'advocacy':**

Many journalists well understand how to navigate the fine line between advocating for their communities and for policy action, and journalistic objectivity. A requirement not to advocate should not be a condition of funding climate and environmental journalism.
- **Funders should be realistic when it comes to asking journalists to assess impact:**

Not all stories can make demonstrable impact, and making impact a condition of funding may lead to journalists choosing "lower ambition" issues in order to be able to demonstrate change.
- **Funders should avoid donor influence on environmental news coverage, and the perception of it:**

Individual newsrooms and journalists need to know and disclose their funders to avoid potential and perceived conflicts of interest.

Recommendations for newsrooms

- **Newsrooms should encourage some journalists to specialize in reporting on climate change and the environment:**

Climate change and/or environmental issues are large and complex. For a journalist to develop in-depth knowledge, they need to become a specialist. Newsrooms should have a dedicated climate/environment reporter wherever possible, and if resources allow, establish climate and environment 'teams'.

- **Media outlets should publish and broadcast more climate/environment stories and make them more prominent:**

Audiences take cues from the volume and prominence of media coverage as to which issues in the news are most important. Newsrooms need to scale up climate/environment coverage and put it on the front page. Reporting about climate and environmental issues should not be tied only to disasters or climate-related events.

- **Newsrooms should encourage collaboration and knowledge sharing between journalists:**

'All stories are climate stories' so journalists should be encouraged and enabled to collaborate within newsrooms to share expertise and ensure climate and environmental issues are highlighted in more stories.

- **Newsrooms should consider collaborating with climate and environment news specialist organizations:**

Newsroom leadership should consider having their news outlet collaborate with organizations that offer training, share climate and environmental news content, and make climate/environment experts accessible to journalists.

- **Newsrooms must help journalists understand misinformation, its origins, and how to avoid it:**

Journalists need training on the varied nature of mis/disinformation in relation to

climate and environment so they can better understand where it comes from, how to detect and refute it, and how to avoid inadvertently proliferating it.

- **Media must work to protect journalists' physical, legal and digital safety:**

Many journalists face threats as a result of their work. Newsrooms should work within national legal frameworks, where possible, and with international journalist defense organizations, to better protect their journalists. NGOs could also work with newsrooms and journalists to deliver training on ways to avoid threats becoming more dangerous.

Recommendations for journalists

- **Journalists must focus on making global environmental issues locally relevant:**

Stories that explain global phenomena, like climate change and environmental harms in a local context are more engaging for audiences.

- **Climate and environmental journalism should cover solutions as well as problems:**

Cataloguing problems without offering solutions may make audiences disengage. Provide possible solutions when addressing problems in climate/environmental reporting. Solutions journalism must critically evaluate and analyze solution initiatives, not be uncritical to maintain positivity.

- **Climate justice perspectives should be highlighted in climate change reporting:**

Responsibility for causing and responding to climate and environmental harms is not equal across the planet. Journalists should address differential responsibility and climate justice perspectives in their climate change reporting.

- **Journalists need to consider their own, and their media outlet's, position on the spectrum between 'objectivity' and 'advocacy':**

Each journalist should consider their own stance on objectivity in journalism versus advocacy for action. They may not be mutually exclusive, especially when reporting on climate/environment (e.g.: avoiding extreme global heating is objectively better than the opposite, so it is not 'unobjective' to advocate for this position).

- **Journalists should not provide a platform for sources that deny climate science:**

The science on climate change is settled. Journalists need to understand the science and report accordingly. Journalists should not quote 'skeptical' views alongside credible climate science sources in the name of balance.

- **Journalists need to build their knowledge of attribution science:**

Understanding attribution of extreme weather events – and their projected increase – will allow journalists to

more accurately convey the influence of climate change on such events to their audiences. This will help audiences understand that climate change is happening now, and its impacts will likely accelerate into the future.

- **Journalists need to work together to ensure climate/environment issues suffuse more reporting:**

Climate and environmental issues affect diverse domains of society. Journalists can work with colleagues working in other specializations (eg: sport, business) to ensure more comprehensive coverage.

- **Journalists need to make clear humans' dependence on the natural world:**

Humans' dependence on nature is rarely addressed in media coverage. Incorporating this theme more centrally into climate and environmental reporting may help conscientize audiences about the urgent need to act on environmental problems.



9.

SUGGESTIONS FOR FURTHER STUDIES





This study has focused on journalists themselves. The priority has been to hear their voices and to piece together a genuinely global snapshot of the state of the work of climate and environmental journalists in the current moment. However, media are multifaceted and journalists are only one category of player. To complement the work presented here, we recommend an aligned study of global audiences. It is important for media organizations to accurately gauge media audiences' level of climate literacy and understanding of environmental issues. Likewise, such a study could ask audiences about their wants and needs in relation to journalism on these subjects – including how audiences prefer to receive such information, whether they prefer to be informed about problems or solutions and what empowers audiences to act.

Journalism and emotion is an emerging area of study, particularly in relation to climate change reporting. Such research might also investigate how audiences and journalists alike are emotionally affected by climate and environment journalism. Such work could reveal more about how journalism's 'emotional turn' could make climate/environment reporting more engaging and impactful.

This study has not primarily focused on newsroom leadership, but rather working journalists themselves. It is crucial that future work focus on the role of media business leaders and those who are in leadership roles running news organizations, including newsroom editors. This will bring an additional perspective to the understanding of 'what makes news' and what makes news business. It is essential to bring this perspective to building a clearer understanding of climate and environmental reporting.

In addition to this, an authentically global media content analysis exercise – focusing on media in high-income countries as well as LMICs, would add

“Saving our planet is now a communications challenge”

further detail to the snapshot provided here of climate and environmental journalism. These kinds of studies have been done, but not on the global scale of the research with journalists undertaken for the current study. An analysis of media discourse across multiple countries of perhaps a 10-year timeframe is a very large undertaking, but an essential one to complement the picture of climate and environmental journalism now.

Finally, more work should be done to understand what aspect of mediated public life most helps catalyze change. This likely includes journalism as well as other catalysts: the media coverage that saturates our lives is surely one of the most powerful sites for changemaking. As veteran environmental media-maker David Attenborough has said “Saving our planet is now a communications challenge”. Further research could investigate all kinds of media and communication outputs: journalistic work, social movement campaigns, strategic communications, types of messaging, images, documentaries – and more, that have successfully contributed to catalyzing positive change. Such research is needed to contribute toward better climate and environment communication in all areas of media.

10.

LIMITATIONS OF THIS STUDY





The current study was undertaken by a small team of six, each working part-time on this study, in a relatively short, 9-month timeframe. The key intention of the study was the broad global spread, as has been described throughout. The very broad nature of this study over an especially small timeframe did mean that the study was less able to drill deep in places. For example, it would have been preferable to include Indigenous journalists, and thoroughly investigate Indigenous media perspectives on environmental journalism.

Likewise, if the survey had been able to run for a longer time period, it may have been possible to achieve both a larger sample, and one that encompassed a more even spread of countries, including pursuing responses from countries that were missing. The 74 interviews could also reveal additional nuance with further systematic analysis, which was

not possible within the timeframe, but which we expect to present in future research publications.

Finally, this study substantiates that internet-based research is indeed *not a limitation*, but perhaps rather an *enabler* for research that might otherwise not be truly globally focused research.

Project team



Dr. Gabi Mocatta

Dr Gabi Mocatta is an interdisciplinary academic who researches at the intersection of media, environment and climate change. She is a former print and online journalist. Gabi is currently Lecturer in Communication, Journalism, at Deakin University in Melbourne, Australia and Research Fellow in Climate Change Communication at the University of Tasmania. Gabi is a 2024/25 Fulbright Scholar.



Shaneka Saville

Shaneka Saville is a PhD researcher at Deakin University, investigating community-driven climate action in rural communities in Australia and Indonesia. She has obtained her undergraduate degree in Biological Sciences at Deakin University, with First Class Honours. Her Honours thesis investigated Australian media's representation of animal agriculture's role in climate change.



Nicholas Payne

Nicholas Payne is a PhD researcher at Deakin University, Australia. His thesis focuses on the power, efficacy, and characteristics of award-winning Australian investigative journalism. He is also a freelance journalist, specializing in investigative and longform reporting, as well as a former media relations and corporate communications professional.



Lova Jansson

Lova Jansson is a Research Fellow in the Faculty of Arts and Education at Deakin University and a postgraduate student in international policy at the London School of Economics and Political Science. She takes a strong interest in sustainable international development, intersecting vulnerabilities, and the role of different actors in shaping and responding to these issues.



Dr. Jerry Lai

Dr Jerry Lai is the Senior eResearch Analyst/ Consultant at Deakin University. Jerry has a background in psychological science (PhD) and statistics (Masters). Jerry works in consultation with research teams, centres, and institutes from across various academic disciplines, providing analytical, statistical, and technical solutions and training to assist staff to conduct good quality research.



Prof. Kristy Hess

Kristy Hess is a Professor of Communication at Deakin University, Australia. She researches local journalism and communication practices in a digital era and advises on areas of media policy. Professor Hess is involved in several nationally-funded projects that involve examining the role of public interest journalism in supporting communities vulnerable to natural disaster. She has also published on barriers and opportunities facing media researchers from the Global South.

Appendix

List of countries from which survey responses were received.

Albania	2	Gambia	4	Myanmar	1	United States	44
Algeria	5	Georgia	1	Nepal	11	Uzbekistan	1
Angola	1	Germany	7	Nigeria	21	Vietnam	6
Argentina	5	Ghana	9	Pakistan	15	Yemen	3
Australia	12	Guatemala	2	Palau	1	Zambia	10
Bangladesh	10	Guinea	3	Papua New Guinea	6	Zimbabwe	8
Belarus	1	Honduras	1	Peru	8		
Belize	2	Hungary	2	Philippines	14		
Benin	2	India	72	Portugal	1		
Bolivia	2	Indonesia	32	Republic of Moldova	2		
Botswana	2	Iraq	12	Russian Federation	1		
Brazil	23	Israel	1	Rwanda	6		
Bulgaria	1	Italy	3	St Vincent & Grenadines	1		
Burkina Faso	1	Japan	2	Sao Tome and Principe	3		
Burundi	4	Jordan	1	Senegal	1		
Cambodia	2	Kazakhstan	1	Sierra Leone	3		
Cameroon	4	Kenya	53	Solomon Islands	3		
Canada	1	Kyrgyzstan	2	South Africa	7		
China	2	Lao	1	Spain	3		
Colombia	11	Lebanon	1	Sri Lanka	10		
Comoros	1	Lesotho	1	Sudan	7		
Republic Congo	3	Liberia	4	Syrian Arab Republic	2		
Costa Rica	1	Luxembourg	1	Tajikistan	3		
Côte d'Ivoire	2	Madagascar	3	Thailand	4		
Croatia	1	Malawi	5	Togo	2		
Democratic Congo	2	Malaysia	4	Trinidad and Tobago	1		
Djibouti	1	Mali	1	Tunisia	5		
Ecuador	13	Mauritania	1	Turkey	1		
Egypt	3	Mauritius	2	Uganda	20		
Ethiopia	3	Mexico	19	Ukraine	1		
Fiji	2	Mongolia	1	United Kingdom	8		
France	1	Morocco	1	Tanzania	89		



Countries of origin of interviewees

Argentina

Australia

Austria

Bahrain

Bhutan

Brazil

Cambodia

Canada

Costa Rica

Cote d' Ivoire

Czech Republic

Ecuador

Fiji

France

Hungary

India

Indonesia

Iraq

Mexico

Mongolia

Nepal

New Zealand

Peru

Philippines

Russia

Solomon Islands

South Africa

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Page 51: Former grantee Amrita Gupta interviewing sources in the field, prior to becoming an EJM staff member / Internews

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Page 75: Journalists interviewing a source in Kenya / Internews

Page 76: CCMP fellow from Indonesia interviewing a country delegate at COP27

Page 78: Le Dinh Tuyen, an EJM journalist, on a boat on the Mekong river reporting a story about sand mining / Internews

Page 80: Participant at an RE workshop in India during the field trip / Internews

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References

- ABC. (2016, June 21). *More plastic than fish in the oceans by 2050, report warns*, ABC News Australia, <https://www.abc.net.au/news/2016-01-21/more-plastic-than-fish-in-the-oceans-by-2050-report-warns/7105936>
- Agin, S., & Karlsson, M. (2021). Mapping the field of climate change communication 1993–2018: Geographically biased, theoretically narrow, and methodologically limited. *Environmental Communication*, 15(4), 431–446. <https://doi.org/10.1080/17524032.2021.1902363>
- Aitamurto, T., & Varma, A. (2018). The Constructive Role of Journalism. *Journalism Practice*, 12(6). <https://doi.org/10.1080/17512786.2018.1473041>
- Azevedo, J., & Marques, M. (2017). Climate literacy: a systematic review and model integration. *International Journal of Global Warming*, 12(3–4), 414–430. <https://doi.org/10.1504/IJGW.2017.084789>
- Bailey, I. (2022). Media coverage, attention cycles and the governance of plastics pollution. *Environmental Policy and Governance*, 32(5), 377–389. <https://doi.org/10.1002/eet.1977>
- Bauer, M.W., Howard, S., Romo Ramos, Y.J., Massarani, L., & Amorim, L. (2013). *Global science journalism report: Working conditions & practices, professional ethos and future expectations*. Science and Development Network. https://eprints.lse.ac.uk/48051/1/Bauer_Global_science_journalism_2013.pdf
- Bloomfield, E.F., & Manktelow, C. (2021). Climate communication and storytelling. *Climatic Change*, 167(3–4). <https://doi.org/10.1007/s10584-021-03199-6>
- Bolin, J. L., & Hamilton, L. C. (2018). The news you choose: News media preferences amplify views on climate change. *Environmental Politics*, 27(3), 455–476. <https://doi.org/10.1080/09644016.2018.1423909>
- Boykoff, M.T. (2011). *Who speaks for the climate? Making sense of media reporting on climate change* (1st ed.). Cambridge University Press.
- Boykoff, M., Aoyagi, M., Ballantyne, A.G., Benham, A., Chandler, P., Daly, M., Doi, K., Fernández-Reyes, R., Hawley, E., Jiménez Gómez, I., Lyytimäki, J., McAllister, L., McNatt, M., Mervaala, E., Mocatta, G., Nacu-Schmidt, A., Oonk, D., Osborne-Gowey, J., Pearman, O., Petersen, L.K., Simonsen, A.H., and Ytterstad, A. (2023). *World Newspaper Coverage of Climate Change or Global Warming, 2004–2023*. Media and Climate Change Observatory Data Sets. Cooperative Institute for Research in Environmental Sciences, University of Colorado. doi.org/10.25810/4c3b-b819.
- Boykoff, M.T., & Boykoff, J.M. (2004). Balance as bias: global warming and the US prestige press. *Global Environmental Change*, 14(2). <https://doi.org/10.1016/j.gloenvcha.2003.10.001>
- Boykoff, M.T., & Yulsman, T. (2013). Political economy, media, and climate change: sinews of modern life. *WIREs Climate Change*, 4(5). <https://doi.org/10.1002/wcc.233>
- Broussard, M., Diakopoulos, N., Guzman, A.L., Abebe, R., Dupagne, M., & Chuan, C. (2019). Artificial intelligence and journalism. *Journalism & mass communication quarterly*, 96(3), 673–695. <https://doi.org/10.1177/107769901985990>
- Brüggemann, M. (2017). Shifting roles of science journalists covering climate change. In M.C. Nisbet, S.S. Ho, E. Markowitz, S. O'Neill, M.S. Schäfer, & J. Thaker (Eds.), *Oxford Research Encyclopedia of Climate Science*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228620.013.354>
- Brüggemann, M., & Engesser, S. (2014). Between consensus and denial: Climate journalists as interpretive community. *Science Communication*, 36(4). <https://doi.org/10.1177/1075547014533662>
- Brüggemann, M., Frech, J., & Schäfer, T. (2022). Transformative journalism: How the global ecological crisis is transforming journalism. In H. Anders (Ed.) *The Routledge Handbook of Environment and Communication* (2nd ed., pp. 221–236). Routledge.
- Bulle, R.J. (2018). The climate lobby: a sectoral analysis of lobbying spending on climate change in the USA, 2000 to 2016. *Climatic Change*, 149(3), 289–303. <https://doi.org/10.1007/s10584-018-2241-z>
- Bryant, N. (Host). (2022, June 16). Activism or accuracy? As climate change disrupts the planet, should it upend journalism as well? [Audio podcast episode]. In *Journo*. Deadset Studios. <https://podfollow.com/1584542376/episode/81d7f8938fafa3492a97c3244737a5a220d85ae/view>
- Cabrera, Y. (2020, February 27). Major news networks devoted less than 4 hours to climate change in 2019. Total. *Grist*. <https://grist.org/climate/major-news-networks-devoted-less-than-four-hours-to-climate-change-in-2019-total/>
- Callison, C. (2017). Climate change communication and Indigenous publics, In M.C. Nisbet, S.S. Ho, E. Markowitz, S. O'Neill, M.S. Schäfer, & J. Thaker (Eds.) *Oxford Research Encyclopedia of Climate Science*. Oxford University Press. <https://doi.org/10.1093/acrefore/9780190228620.013.411>
- Carnie, T. (2020). Environmental journalism – a perspective from South Africa. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of*

- Environmental Journalism* (1st ed., pp. 331-342). Routledge.
- Carvajal, M., García-Avilés, J.A., & González, J.L. (2012). Crowdfunding and non-profit media. *Journalism Practice*, 6(6), 638-647. <https://doi.org/10.1080/17512786.2012.667267>
- Comfort, S.E., Tandoc, E., & Gruszczynski, M. (2020). Who is heard in climate change journalism? Sourcing patterns in climate change news in China, India, Singapore, and Thailand. *Climatic Change*, 158(3). <https://doi.org/10.1007/s10584-019-02597-1>
- Comfort, S.E., & Blankenship, J. (2021). Curated journalism: A field theory approach to journalistic production by environmental non-governmental organizations. *Journalism*, 22(2). <https://doi.org/10.1177/1464884918786402>
- Cook, J. (2022). Understanding and countering misinformation about climate change. In I. Chilwa, & S. Samoilenko (Eds.), *Handbook of Research on Deception, Fake News, and Misinformation Online* (1st ed., pp. 281-306). IGI Global.
- Cottle, S., & Nolan, D. (2007). Global Humanitarianism and the Changing Aid-Media Field. *Journalism Studies*, 8(6). <https://doi.org/10.1080/14616700701556104>
- Cox, R., (2007). Nature's "crisis disciplines": Does environmental communication have an ethical duty?. *Environmental Communication*, 1(1), 5-20. <https://doi.org/10.1080/17524030701333948>
- Cox, R., & Schwarze, S. (2022). The media/communication strategies of environmental NGOs. In A. Hansen, & R. Cox (Eds.), *The Routledge Handbook of Environment and Communication* (2nd ed., pp. 114-131). Routledge.
- Das, J. (2019). *Reporting Climate Change in the Global North and South: Journalism in Australia and Bangladesh*. Routledge. <https://doi.org/10.4324/9780429402210>
- Das, J., (2020). The struggle for climate justice: Three Indian news media coverage of climate change. *Environmental Communication*, 14(1), 126-140. <https://doi.org/10.1080/17524032.2019.1629976>
- de Assis, C. (2024, March 4). *Reporters covering environment and climate in Latin America confront threats and harassment in the field*. LatAm Journalism Review. <https://latamjournalismreview.org/articles/reporters-covering-environment-and-climate-in-latin-america-confront-threats-and-harassment-in-the-field/>
- Deuze, M., & Witschge, T. (2018). Beyond journalism: Theorizing the transformation of journalism. *Journalism*, 19(2), 165-181. <https://doi.org/10.1177/1464884916688550>
- DiBonaventura, M., Wagner, S., Girman, C.J., Kimberly Brodovicz, K., Zhang, Q., Qiu, Y., Sri-Ram, P., & Radican, L. (2010). Multinational internet-based survey of patient preference for newer oral or injectable type 2 diabetes medication. *Patient Preference and Adherence*, 4, 397-406. <https://doi.org/10.2147/ppa.s14477>
- Dodd, B. (2021). *Solutions journalism: News at the intersection of hope, leadership, and expertise*. Lexington Books.
- Downs, A. (1972). Up and down with ecology – The 'issue-attention cycle'. *The Public Interest*, 28, 38-50. <https://doi.org/10.4337/9781035335336.00011>
- Eide, E., & Kunelius, R. (2012). *Media meets climate: The global challenge for journalism*. Nordicom, University of Gothenburg.
- Eisen, M.B., & Brown, P.O. (2022). Rapid global phaseout of animal agriculture has the potential to stabilize greenhouse gas levels for 30 years and offset 68 percent of CO2 emissions this century. *PLoS Climate*, 1(2). <https://doi.org/10.1371/journal.pclm.0000010>
- Ejaz, W., & Najam, A. (2023). The Global South and Climate Coverage: From News Taker to News Maker. *Social Media+ Society*, 9(2). <https://doi.org/10.1177/20563051231177904>
- Fahn, J. (2004). *A land on fire: The environmental consequences of the Southeast Asian boom*. Basic Books.
- Fahy, D. (2018). Objectivity as trained judgment: How environmental reporters pioneered journalism for a "post-truth" era. *Environmental Communication*, 12(7). <https://doi.org/10.1080/17524032.2018.1495093>
- Fahy, D., & Nisbet, M.C. (2011). The science journalist online: Shifting roles and emerging practices. *Journalism*, 12(7). <https://doi.org/10.1177/1464884911412697>
- Fisher, C. (2016). The advocacy continuum: Towards a theory of advocacy in journalism. *Journalism*, 17(6). <https://doi.org/10.1177/1464884915582311>
- Freedman, E. (2020). In the crosshairs: the perils of environmental journalism. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 70-82). Routledge.
- Friedman, S.M. (2015). The changing face of environmental journalism in the United States. In A. Hansen, & R. Cox (Eds.), *The Routledge Handbook of Environment and Communication* (1st ed.). Routledge
- Gibson, T. (2017). Economic, technological, and organizational factors influencing news coverage of climate change. In M.C. Nisbet, S.S. Ho, E. Markowitz, S. O'Neill, M.S. Schäfer, & J. Thaker (Eds.), *Oxford Research Encyclopedia of Climate Science*. Oxford University

- Press. <https://doi.org/10.1093/acrefore/9780190228620.013.355>
- Gostoli, Y. (2023, December 2). *Reparations fund 'historic', but real fight begins now: Climate campaigners*. Al Jazeera. <https://www.aljazeera.com/features/2023/12/2/reparations-fund-historic-but-real-fight-begins-now-climate-campaigners>
- Hackett, R.A., Forde, S., Gunster, S., & Foxwell-Norton, K. (2017). *Journalism and Climate Crisis: Public Engagement, Media Alternatives*. Routledge.
- Hämeen-Anttila, K., Nordeng, H., Kokki, E., Jyrkka, J., Lupattelli, A., Vainio, K., & Enlund, H. (2014). Multiple information sources and consequences of conflicting information about medicine use during pregnancy: a multinational internet-based survey. *Journal of Medical Internet Research*, 16(2), 1–11. <https://doi.org/10.2196/jmir.2939>
- Hansen, A. (2020). Sources, strategic communication, and environmental journalism. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism*. (1st ed., pp. 38–51). Routledge.
- Hase, V., Mahl, D., Schäfer, M.S., & Keller, T.R. (2021). Climate change in news media across the globe: An automated analysis of issue attention and themes in climate change coverage in 10 countries (2006–2018). *Global Environmental Change*, 70. <https://doi.org/10.1016/j.gloenvcha.2021.102353>
- Hermans, L., & Prins, T. (2022). Interest matters: The effects of constructive news reporting on Millennials' emotions and engagement. *Journalism*, 23(5). <https://doi.org/10.1177/1464884920944741>
- Hess, K., & Waller, L. (2017). *Local journalism in a digital world: Theory and practice in the digital age*. Palgrave MacMillan.
- Hertsgaard, M., & Pope, K. (2021, June 3). *The media is still mostly failing to convey the urgency of the climate crisis*. *The Guardian*. <https://www.theguardian.com/commentisfree/2021/jun/03/media-climate-change-crisis-emergency>
- Hiltunen, I. (2017). Trouble in paradise? Self-censorship, outside interference and harassment of journalists in Finland. *Media Asia*, 44(1). <https://doi.org/10.1080/01296612.2017.1374632>
- Hoegh-Guldberg, O., Jacob, D., Taylor, M., Guillén Bolaños, T., Bindi, M., Brown, S., Camilloni, I.A., Diedhiou, A., Djalante, R., Ebi, K., & Engelbrecht, F. (2019). The human imperative of stabilizing global climate change at 1.5 C. *Science*, 365(6459). <https://doi.org/10.1126/science.aaw6974>
- Intergovernmental Panel on Climate Change. (2018). *Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty*. United Nations. <https://www.ipcc.ch/sr15/>
- Intergovernmental Panel on Climate Change. (2023). *Climate Change 2023 Synthesis Report: Summary for Policymakers*. United Nations. <https://www.ipcc.ch/report/sixth-assessment-report-cycle>
- Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. (2019). *Summary for policymakers of the global assessment report on biodiversity and ecosystem services*. United Nations. <https://doi.org/10.5281/zenodo.3553579>
- Ipsos. (2019, August 1). *The impact of declining trust in the media*. Ipsos. <https://www.ipsos.com/en-uk/impact-declining-trust-media>
- Jjuuko, M. (2020). Environmental journalism in East Africa: Opportunities and challenges in the 21st century. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 345–365). Routledge.
- Johnson, C.N., Balmford, A., Brook, B.W., Buettel, J.C., Galetti, M., Guangnchun, L., & Wilmshurst, J.M. (2017). Biodiversity losses and conservation responses in the Anthropocene. *Science*, 356(6335).
- Kertysova, K. (2018). Artificial intelligence and disinformation: How AI changes the way disinformation is produced, disseminated, and can be countered. *Security and Human Rights*, 29(1–4), 55–81. <https://doi.org/10.1163/18750230-02901005>
- Konishi, M. (2018). The Impact of Global NGOs on Japanese Press Coverage of Climate Negotiations: An Analysis of the New “Background Media Strategy”. *Environmental Communication*, 12(4). <https://doi.org/10.1080/17524032.2017.1308403>
- Koop, F. (2020). Environmental journalism in Latin America. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 383–391). Routledge.
- Kovarik, B. (2020). The rise of environmental journalism in Asia, Africa, and Latin America. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 52–69). Routledge.
- Küng, L. (2016). *Innovators in digital news* (1st ed.). I. B. Tauris & Company.
- Lamb, W.F., Mattioli, G., Levi, S., Roberts, J.T., Capstick, S., Creutzig, F., Minx, J.C., Müller-Hansen, F., Culhane, T., & Steinberger, J.K. (2020). Discourses of climate delay. *Global Sustainability*, 3, 1–5. <https://doi.org/10.1017/sus.2020.13>
- Lester, L. (2013). On flak, balance

and activism: The ups and downs of environmental journalism. In S. Tanner, & N. Richardson (Eds.), *Journalism Research and Investigation in a Digital World* (1st ed., pp. 221–232). Oxford University Press.

Li, J. (2020). Environmental news reports in China. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 278–290). Routledge.

Lidubwi, J., & Wamwea, G. (2023). *Climate Journalism in East Africa in an Era of Misinformation*. Earth Journalism Network. https://earthjournalism.net/sites/default/files/2023-09/Climate%20Misinformation%20in%20East%20Africa%20September%202023_Final.pdf

Looijmans, A., Spahrkäs, S.S., Sanderman, R., & Hagedoorn, M. (2022). Ethical review procedures in international internet-based intervention studies. *Internet interventions*, 28. <https://doi.org/10.1016/j.invent.2021.100487>

Lough, K., & McIntyre, K. (2023). A systematic review of constructive and solutions journalism research. *Journalism*, 24(5), 1069–1088. <https://doi.org/10.1016/j.invent.2021.100487>

Lück, J., Wozniak, A., & Wessler, H. (2016). Networks of Coproduction: How Journalists and Environmental NGOs Create Common Interpretations of the UN Climate Change Conferences. *The International Journal of Press/Politics*, 21(1). <https://doi.org/10.1177/1940161215612204>

Malan, M. (2018). Quid pro quo: How donor-funded journalism redefines job descriptions. *African Journalism Studies*, 39(2), 121–129. <https://doi.org/10.1080/23743670.2018.1468347>

Matthews, J., & Onyemaobi, K. (2020). Precarious professionalism: Journalism

and the fragility of professional practice in the Global South. *Journalism Studies*, 21(13), 1836–1851. <https://doi.org/10.1080/1461670X.2020.1797524>

McAllister, L., Daly, M., Chandler, P., McNatt, M., Benham, A., & Boykoff, M. (2021). Balance as bias, resolute on the retreat? Updates & analyses of newspaper coverage in the United States, United Kingdom, New Zealand, Australia and Canada over the past 15 years. *Environmental Research Letters*, 16(9). <https://doi.org/10.1088/1748-9326/ac14eb>

McIntyre, K. (2019). Solutions Journalism: The Effects of Including Solution Information in News Stories About Social Problems. *Journalism Practice*, 13(1). <https://doi.org/10.1080/17512786.2017.1409647>

Miller, J. (2009). NGOs and “modernization” and “democratization” of media. *Global Media and Communication*, 5(1), 9–33. <https://doi.org/10.1177/1742766508101312>

Milstein, T., & Mocatta, G. (2022). Environmental Communication Theory and Practice for Global Transformation: An Ecocultural Approach. In Y. Miike, & J. Yin (Eds.), *The Handbook of Global Interventions in Communication Theory* (1st ed., pp. 474–490). Routledge.

Mishra, M. (2020). Environmental journalism in India – past, present, and future. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 291–305). Routledge.

Mocatta, G., Mayes, E., Hess, K., & Hartup, M.E. (2023). The trouble with ‘quiet advocacy’: local journalism and reporting climate change in rural and regional Australia. *Media, Culture & Society*, 45(1), 157–177. <https://doi.org/10.1177/01634437221104686>

Moon, R. (2018). Getting into living rooms: NGO media relations

work as strategic practice. *Journalism*, 19(7). <https://doi.org/10.1177/1464884917691542>

Moser, S.C. (2010). Communicating climate change: History, challenges, process and future directions. *WIREs Climate Change*, 1(1). <https://doi.org/10.1002/wcc.11>

Munoz, S. (2023, October 12). *How oil companies put the responsibility for climate change on consumers*. The Conversation. <https://theconversation.com/how-oil-companies-put-the-responsibility-for-climate-change-on-consumers-214132#:~:text=Through%20numerous%20advertisements%20promoting%20the,solutions%20and%20reducing%20carbon%20emissions.>

Myers, M. (2018). Nigerian Newspapers: The Attractions and Drawbacks of Foreign Aid Funding. *African Journalism Studies*, 39(2), 30–41. <https://doi.org/10.1080/23743670.2018.1473273>

Nelson, J.L. (2021). *Imagined audiences: How journalists perceive and pursue the public*. Journalism and Pol Commun Unbound Series, Oxford University Press.

Nettlefold, J., & Pecl, G.T. (2022). Engaged journalism and climate change: Lessons from an audience-led, locally focused Australian collaboration. *Journalism Practice*, 16(1), 19–34. <https://doi.org/10.1080/17512786.2020.1798272>

Neuzil, M. (2020). The development of environmental journalism in the Western world. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 18–37). Routledge.

Newlands, M. (2020). Environmental journalism in the Asia and Pacific Region. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Communication* (1st ed., pp. 316–329). Routledge.

Newman, N., & Fletcher, R. (2017). *Bias,*

- Bullshit and Lies Audience Perspectives on Low Trust in the Media*. Reuters Institute. <https://reutersinstitute.politics.ox.ac.uk/sites/default/files/201711/Nic%20Newman%20and%20Richard%20Fletcher%20-%20Bias%2C%20Bullshit%20and%20Lies%20-%20Report.pdf>
- Newman, N., Fletcher, R., Schulz, A., Andi, S. & Kleis Nielsen, R. (2020). *Reuters Institute Digital News Report 2020*. Reuters Institute. <https://www.digitalnewsreport.org/survey/2020/>
- Newman, N., Fletcher, R., Eddy, K., Robertson, C.T., & Kleis Nielsen, R. (2023). *Reuters Institute Digital News Report 2023*. Reuters Institute. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2023-06/Digital_News_Report_2023.pdf
- Newman, T. P., Nisbet, E. C., & Nisbet, M. C. (2018). Climate change, cultural cognition, and media effects: Worldviews drive news selectivity, biased processing, and polarized attitudes. *Public Understanding of Science*, 27(8), 985–1002. <https://doi.org/10.1177/0963662518801170>
- Nguyen, A., & Tran, M. (2019). Science journalism for development in the Global South: A systematic literature review of issues and challenges. *Public Understanding of Science*, 28(8). <https://doi.org/10.1177/0963662519875447>
- NORC at University of Chicago. (2023). Journalism and philanthropy: growth, diversity, and potential conflicts of interests. University of Chicago. <https://live-lenfest-2023.pantheonsite.io/wp-content/uploads/2023/08/MIF-report-08-31.pdf>
- Okpara, N. (2020). Environmental journalism in Nigeria and Gambia. In D.B. Sachsman, & J.M. Valenti (Eds.), *The Routledge Handbook of Environmental Journalism* (1st ed., pp. 366–372). Routledge.
- Osaka, S., Painter, J., Walton, P., & Halperin, A. (2020). Media representation of extreme event attribution: a case study of the 2011–17 California drought. *Weather, Climate, and Society*, 12(4), 847–862. <https://doi.org/10.1175/WCAS-D-19-0050.1>
- Oxford University/UNDP. (2021). *People's Climate Vote*. Oxford University/UNDP. <https://www.undp.org/publications/peoples-climate-vote>
- Painter, J., Kristiansen, S., & Schäfer, M.S. (2018). How 'digital-born' media cover climate change in comparison to legacy media: A case study of the COP 21 summit in Paris. *Global Environmental Change*, 48. <https://doi.org/10.1016/j.gloenvcha.2017.11.003>
- Painter, J., Osaka, S., Ettinger, J., & Walton, P. (2020). Blaming climate change? How Indian mainstream media covered two extreme weather events in 2015. *Global Environmental Change*, 63. <https://doi.org/10.1016/j.gloenvcha.2020.102119>
- Poornananda, D.S. (2022). *Environmental journalism: Reporting on environmental concerns and climate change in India*. SAGE Publishing India.
- Powers, M. (2015). Contemporary NGO–Journalist Relations: Reviewing and Evaluating an Emergent Area of Research. *Sociology Compass*, 9(6). <https://doi.org/10.1111/soc4.12267>
- Powers, M. (2018). NGOs as Newsmakers: *The Changing Landscape of International News* (1st ed.). Colombia University Press. <https://doi.org/10.7312/powe18492>
- Reporters Sans Frontières. (2020). *Red alert for green journalism – 10 environmental reporters killed in five years*. RSF. <https://rsf.org/en/red-alert-green-journalism-10-environmental-reporters-killed-five-years>
- Reporters Sans Frontières. (2015). *Hostile Climate for Environmental Journalists*. RSF. <https://rsf.org/en/environmental-journalism-increasingly-hostile-climate>
- Reporters Sans Frontières. (2021). *China Country profile*. RSF. <https://rsf.org/en/country/china>,
- Reporters Sans Frontières. (2024). *World Press Freedom Index*. RSF. <https://rsf.org/en/index>
- Rickard, L., Yang, Z., & Schuldt, J. (2016). Here and now, there and then: How “departure dates” influence climate change engagement. *Global Environmental Change*, 38, 97–107. <https://doi.org/10.1016/j.gloenvcha.2016.03.003>
- Robbins, D. (2024). A history of digital environmental journalism at the BBC and the Guardian. *Journalism*, 25(5), 1130–1147. <https://doi.org/10.1177/14648849231179785>
- Robbins, D., & Wheatley, D. (2021). Complexity, Objectivity, and Shifting Roles: Environmental Correspondents March to a Changing Beat. *Journalism Practice*, 15(9). <https://doi.org/10.1080/17512786.2021.1910981>
- Rochyadi-Reetz, M., & Teng'O, D. (2021). Prioritizing Development, Vying for Attention: Factors Influencing the Practice of Environmental Journalism in the Global South. In B. Takahashi, J. Metag, J. Thaker, & S.E. Comfort (Eds.), *The Handbook of International Trends in Environmental Communication* (1st ed., pp. 220–231). <https://doi.org/10.4324/9780367275204>
- Rodríguez, C.M.A., Rodríguez, M., & Villalba, C. (2021). Environmental journalism in the Latin American digital press. *Centro Sur Social Science Journal*, 5(2), 1–21. <https://doi.org/10.37955/cs.v5i2.153>
- Russell, A., Kangas, J., Kunelius, R., & Painter, J. (2023). Niche climate news sites and the changing context of covering catastrophe. *Journalism*, 24(7).

<https://doi.org/10.1177/14648849221113119>

[org/10.1177/14648849221113119](https://doi.org/10.1177/14648849221113119)

Sachsman, D.B., & Valenti, J.M. (2022). Environmental reporters in a time of change. In A. Hansen, & R. Cox (Eds.), *The Routledge Handbook of Environment and Communication* (2nd ed., pp.181-194). Routledge.

Saeed, S., Makhdam, M.S.A., Anwar, S., & Yaseen, M.R. (2023). Climate Change Vulnerability, Adaptation, and Feedback Hypothesis: A Comparison of Lower-Middle, Upper-Middle, and High-Income Countries. *Sustainability*, 15(5), 1-25. <https://doi.org/10.3390/su15054145>

Sakellari, M. (2024). Communicating climate change induced migration: the role of NGOs. *Open Research Europe*, 3. <https://doi.org/10.12688/openreseurope.16232.1>

Salvesen, I. (2018). Should journalists campaign on climate change? What happened when journalists in a global media organization turned climate change activists. Reuters Institute. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2019-01/Paper.%20Salvesen%20-%20RISJ%20FINAL_0.pdf

Saville, S., Cardilini, A.P.A., & Mocatta, G. (2024). Ignoring the cow in the room: Australian media representation of animal agriculture and climate change (under review). Available at: <https://doi.org/10.21203/rs.3.rs-3756342/v1>

Scannell, L., & Gifford, R. (2013). Personally relevant climate change: The role of place attachment and local versus global message framing in engagement. *Environment and Behavior*, 45(1), 60-85. <https://doi.org/10.1177/001391651142119>

Schäfer, M.S., & Painter, J. (2021). Climate journalism in a changing media ecosystem: assessing the production of climate change-related news around the world. *WIREs Climate Change*,

12(1). <https://doi.org/10.1002/wcc.675>

Schiffrin, A. (2017). *Same Beds, Different Dreams? Charitable Foundations and Newsroom Independence in the Global South*. CIMA. www.cima.ned.org

Semujju, B. (2015). Frontline farmers, backline sources: women as a tertiary voice in climate change coverage. *Feminist Media Studies*, 15(4), 658-674. <https://doi.org/10.1080/14680777.2014.946942>

Sharif, A., & Medvecky, F. (2018). Climate change news reporting in Pakistan: a qualitative analysis of environmental journalists and the barriers they face. *Journal of Science Communication*, 17(1). <https://doi.org/10.22323/2.17010203>

Shoemaker, P.J., & Reese, S.D. (2013). *Mediating the message in the 21st century: A media sociology perspective* (3rd ed.). Routledge.

Slow, O. (2023, July 14). US refuses climate reparations for developing nations, *BBC News*. <https://www.bbc.com/news/world-us-canada-66197366>

Solnit, R. (2021, August 23). Big oil coined 'carbon footprints' to blame us for their greed. Keep them on the hook. *The Guardian*. <https://www.theguardian.com/commentisfree/2021/aug/23/big-oil-coined-carbon-footprints-to-blame-us-for-their-greed-keep-them-on-the-hook>

Soroka, S., Farnsworth, S., Young, L., & Lawlor, A. (2012). Event-Driven Environmental News in the U.S. and Canada, *Electronic Media & Politics* 1, 10, 143-157.

Strauss, N., Painter, J., Ettinger, J., Doutreix, M.N., Wonneberger, A., & Walton, P. (2022). Reporting on the 2019 European heatwaves and climate change: journalists' attitudes, motivations and role perceptions. *Journalism Practice*, 16(2-3), 462-485. <https://doi.org/10.1080/17512786.2021.1969988>

Supran, G., & Oreskes, N. (2017). Assessing ExxonMobil's climate change communications (1977-2014). *Environmental Research Letters*, 12(8). <https://doi.org/10.1088/1748-9326/aa815f>

Supran, G., & Oreskes, N., (2021). Rhetoric and frame analysis of ExxonMobil's climate change communications. *One Earth*, 4(5), 96-719. <https://doi.org/10.1016/j.oneear.2021.04.014>

Sweet, M., Williams, M., Armstrong, R., & McInerney, M. (2021). The Pandemic and Public Interest Journalism: Crisis, Survival—and Rebirth?. In M. Lewis, E. Govender, & K. Holland (Eds.), *Communicating COVID-19: Interdisciplinary perspectives* (1st ed., pp. 21-40). Palgrave MacMillan.

Takahashi, B. (2023). Towards inclusive international environmental communication scholarship: The role of Latin America. *International Journal of Cultural Studies*, 26(4), 372-391. <https://doi.org/10.1177/13678779221146302>

Thier, K., Abdenour, J., Walth, B., & Dahmen, N.S. (2021). A narrative solution: The relationship between solutions journalism, narrative transportation, and news trust. *Journalism*, 22(10), 2511-2530. <https://doi.org/10.1177/1464884919876369>

Thier, K., & Lin, T. (2022). How Solutions Journalism Shapes Support for Collective Climate Change Adaptation. *Environmental Communication*, 16(8). <https://doi.org/10.1080/17524032.2022.2143842>

Tofel, R. (2013). *Non-Profit Journalism: Issues Around Impact*. ProPublica. https://s3.amazonaws.com/propublica/assets/about/LFA_ProPublica-white-paper_2.1.pdf

Tolmie, C. (2023). *Strengthening Reporters, Strengthening Reporting: How Internews' Earth Journalism Network Impacts the Careers of*

- Environmental Journalists*. Earth Journalism Network. https://earthjournalism.net/sites/default/files/2023-04/EJN%20Career%20impact%20report_revised_20230418_clean.pdf
- Tong, J. (2015). *Investigative journalism, environmental problems and modernisation in China* (1st ed.). Springer.
- Townend, J. (2016). 'Charitable journalism': Oxymoron or opportunity?. *Ethical Space: The International Journal of Communication Ethics*, 13(2-3), 81-87.
- Townend, J, Muller, D., & Keeble, R. (2016). 'Looking beyond the traditional media business model'. *Ethical Space: The International Journal of Communication Ethics*, 13(2-3), 3-5.
- Treen, K.M.I., Williams, H.T.P., & O'Neill, S.J. (2020). Online misinformation about climate change. *Wiley Interdisciplinary Reviews: Climate Change*, 11(5). <https://doi.org/10.1002/wcc.665>
- Trionfi, B. (2024). *Climate and environmental journalism under fire: Threats to Free and Independent Coverage of Climate Change and Environmental Degradation*. International Press Institute. <https://ipi.media/wp-content/uploads/2024/02/Climate-and-Environmental-Journalism-Under-Fire-2024-Feb.pdf>
- Union of Concerned Scientists. (2022, January 14). *Each Country's Share of CO2 Emissions*. Union of Concerned Scientists. <https://www.ucsusa.org/resources/each-countrys-share-co2-emissions>
- United Nations. (2023). *Global Issues: Climate Change*. United Nations. <https://www.un.org/en/global-issues/climate-change#:~:text=Climate%20Change%20is%20the%20defining,scope%20and%20unprecedented%20in%20scale>.
- Van der Linden, S., Leiserowitz, A., Rosenthal, S., & Maibach, E. (2017). Inoculating the Public against Misinformation about Climate Change. *Global Challenges*, 1(2). <https://doi.org/10.1002/gch2.201600008>
- Warren, J. (2016, September 15). *One of the Most Dangerous Beats in Journalism, Revealed*. Vanity Fair. [https://www.vanityfair.com/news/2016/09/one-of-the-most-dangerous-beats-in\[1\]journalism-revealed](https://www.vanityfair.com/news/2016/09/one-of-the-most-dangerous-beats-in[1]journalism-revealed)
- Watts J (2020, October 9). *Climate Crisis: Does journalism actually make a difference?*. The Guardian. <https://www.theguardian.com/environment/2020/oct/09/turning-up-the-spotlight-how-our-climate-coverage-has-made-a-difference>
- Wright, K. (2019). NGOs as News Organizations. *Oxford Research Encyclopedia of Communication*. <https://doi.org/10.1093/acrefore/9780190228613.013.852>
- Zapulla, A., & Simon, J. (2023, May 10). *Weaponizing the law against journalists is killing our democracies*. World Economic Forum. <https://www.weforum.org/agenda/2023/05/journalist-media-legal-repression/>

